

# BCI IV Harvill Industrial Center (PPT220001)

AIR QUALITY IMPACT ANALYSIS
COUNTY OF RIVERSIDE

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# LIST OF ABBREVIATED TERMS

% Percent

°F Degrees Fahrenheit

(1) Reference

μg/m<sup>3</sup> Microgram per Cubic Meter

1992 CO Plan 1992 Federal Attainment Plan for Carbon Monoxide

1993 CEQA Handbook SCAQMD's CEQA Air Quality Handbook (1993)

2016-2040 RTP/SCS 2016-2040 Regional Transportation Plan/Sustainable

Communities Strategy

AB 2595 California Clean Air Act
AQIA Air Quality Impact Analysis
AQMP Air Quality Management Plan
BACT Best Available Control Technology

BC Black Carbon

Brief Brief of Amicus Curiae by the SCAQMD in the Friant Ranch

Case

C<sub>2</sub>Cl<sub>4</sub> Perchloroethylene C<sub>4</sub>H<sub>6</sub> 1,3-butadiene

C<sub>6</sub>H<sub>6</sub> Benzene

 $C_2H_3Cl$  Vinyl Chloride  $C_2H_4O$  Acetaldehyde

CAA Federal Clean Air Act

CAAQS California Ambient Air Quality Standards
CalEEMod California Emissions Estimator Model

California Environmental Protection Agency
CALGreen California Green Building Standards Code

CAP Climate Action Plan

CAPCOA California Air Pollution Control Officers Association

CARB California Air Resources Board
CCR California Code of Regulations
CEC California Energy Commission

CEQA California Environmental Quality Act
CEQA Guidelines 2019 CEQA Statute and Guidelines

CH<sub>2</sub>O Formaldehyde
CO Carbon Monoxide
COH Coefficient of Haze
COHb Carboxyhemoglobin



County County of Riverside

Cr(VI) Chromium

CTP Clean Truck Program

DPM Diesel Particulate Matter

DRRP Diesel Risk Reduction Plan

EC Elemental Carbon

EIR Environmental Impact Report
EMFAC Emissions FACtor Model

EPA Environmental Protection Agency

ETW Equivalent Test Weight

EV Electric Vehicle
GHG Greenhouse Gas

GVWR Gross Vehicle Weight Rating

H<sub>2</sub>S Hydrogen Sulfide HDT Heavy-Duty Trucks

HHDT Heavy-Heavy-Duty Trucks

HI Hazard Index
hp Horsepower
lbs Pounds

Ibs/day Pounds Per Day
LDA Light Duty Auto
LDT1/LDT2 Light-Duty Trucks

LHDT1/LHDT2 Light-Heavy-Duty Trucks

LST Localized Significance Threshold

LST Methodology Final Localized Significance Threshold Methodology

MATES Multiple Air Toxics Exposure Study

MCY Motorcycles

MDV Medium-Duty Vehicles

MHDT Medium-Heavy-Duty Trucks
MICR Maximum Individual Cancer Risk

MM Mitigation Measures

mph Miles Per Hour

MWELO California Department of Water Resources' Model Water

Efficient

N<sub>2</sub> Nitrogen

N<sub>2</sub>O Nitrous Oxide

NAAQS National Ambient Air Quality Standards

NO Nitric Oxide



NO<sub>2</sub> Nitrogen Dioxide NO<sub>X</sub> Nitrogen Oxides

 $O_2$  Oxygen  $O_3$  Ozone

O<sub>2</sub> Deficiency Chronic Hypoxemia
OBD-II On-Board Diagnostic

ODC Ozone Depleting Compounds

Pb Lead

PM Particulate Matter

PM<sub>10</sub> Particulate Matter 10 microns in diameter or less PM<sub>2.5</sub> Particulate Matter 2.5 microns in diameter or less

POLA Port of Los Angeles
POLB Port of Long Beach
ppm Parts Per Million

Project BCI IV Harvill Industrial Center

RECLAIM Regional Clean Air Incentives Market RFG-2 Reformulated Gasoline Regulation

ROG Reactive Organic Gases

SB Senate Bill

SCAB South Coast Air Basin

SCAG Southern California Association of Governments
SCAQMD South Coast Air Quality Management District

sf Square Feet

SIPs State Implementation Plans

SO<sub>2</sub> Sulfur Dioxide

SO<sub>4</sub> Sulfates

SO<sub>X</sub> Sulfur Oxides

SRA Source Receptor Area
TAC Toxic Air Contaminant
Title 24 California Building Code
TITLE I Non-Attainment Provisions
TITLE II Mobile Sources Provisions

UFP Ultrafine Particles URBEMIS URBan EMISsions

VMT Vehicle Miles Traveled

VOC Volatile Organic Compounds

vph Vehicles Per Hour



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## **EXECUTIVE SUMMARY**

#### **ES.1** SUMMARY OF FINDINGS

The results of this *BCI IV Harvill Industrial Center Air Quality Impact Analysis* (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines (CEQA Guidelines)* (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

**TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS** 

Analysis	Report	Significance Findings	
Section		Unmitigated	Mitigated
Regional Construction Emissions	3.4	Less Than Significant	n/a
Localized Construction Emissions	3.7	Less Than Significant	n/a
Regional Operational Emissions	3.5	Less Than Significant	n/a
Localized Operational Emissions	3.7	Less Than Significant	n/a
CO "Hot Spot" Analysis	3.9	Less Than Significant	n/a
Air Quality Management Plan	3.10	Less Than Significant	n/a
Sensitive Receptors	3.11	Less Than Significant	n/a
Odors	3.12	Less Than Significant	n/a
Cumulative Impacts	3.13	Less Than Significant	n/a

#### **ES.2** REGULATORY REQUIREMENTS

There are numerous requirements that development projects must comply with by law, and that were put in place by federal, State, and local regulatory agencies for the improvement of air quality.

Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or



other forms of property, or can cause excessive soiling on any other parcel shall conform to the requirements of the South Coast Air Quality Management District (SCAQMD).

#### **SCAQMD RULES**

SCAQMD Rules that are currently applicable during construction activity for this Project are described below.

#### **SCAQMD RULE 402**

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

**Odor Emissions.** All uses shall be operated in a manner such that no offensive odor is perceptible at or beyond the property line of that use.

#### **SCAQMD RULE 403**

This rule is intended to reduce the amount of particulate matter (PM) entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities. More specifically, Rule 403 would require watering disturbed surfaces three times per day during grading activities.

**Dust Control, Operations.** Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or other forms of property, or can cause excessive soiling on any other parcel, shall conform to the requirements of the SCAQMD.

#### **SCAQMD RULE 1113**

This rule serves to limit the Volatile Organic Compound (VOC) content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects.

#### **SCAQMD RULE 1301**

This rule is intended to provide that pre-construction review requirements to ensure that new or relocated facilities do not interfere with progress in attainment of the National Ambient Air Quality Standards (NAAQS), while future economic growth within the SCAQMD is not unnecessarily restricted. The specific air quality goal is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors. Rule 1301 also limits emission increases of ammonia, and Ozone Depleting Compounds (ODCs) from new, modified or relocated facilities by requiring the use of Best Available Control Technology (BACT).



#### **SCAQMD RULE 1401**

A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States (U.S.) Bureau of Mines.

Although the Project would comply with the above regulatory requirements, it should be noted that there is no way to quantify these reductions in the California Emissions Estimator Model (CalEEMod). The two most pertinent regulatory requirements that could be modeled, are Rule 403 (Fugitive Dust) (2) and Rule 1113 (Architectural Coatings) (3). Because they are required by law, credit for Rule 403 and Rule 1113 have been taken in the analysis.



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#### 1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed BCI IV Harvill Industrial Center (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the SCAQMD.

#### 1.1 SITE LOCATION

The proposed Project is located on the northeast corner of Harvill Avenue and Cajalco Road in the County of Riverside, as shown on Exhibit 1-A.

#### 1.2 PROJECT DESCRIPTION

Since future tenants are unknown, the analysis herein considers two options for the proposed building. "Option A" considers the development of 99,770 square feet (sf) of industrial use with a 118-stall truck parking lot. "Option B" considers the development of 99,770 square feet (sf) of warehouse use with a 118-stall truck parking lot. The site plan for the proposed Project is shown on Exhibit 1-B. Although the latest plan reflects a 118-stall truck parking lot, the analysis conducted conservatively assumes a 133-stall truck parking lot, which is consistent with the Traffic Analysis and associated trip generation evaluated for the Project. The Project does not propose a cold storage use and therefore is not expected to generate Transport Refrigeration Units (TRUs). The Project site has a General Plan Land Use designation of Light Industrial (LI) and zoning designation of Manufacturing-Service Commercial (M-SC). APNs are 317-130-034 and -035.

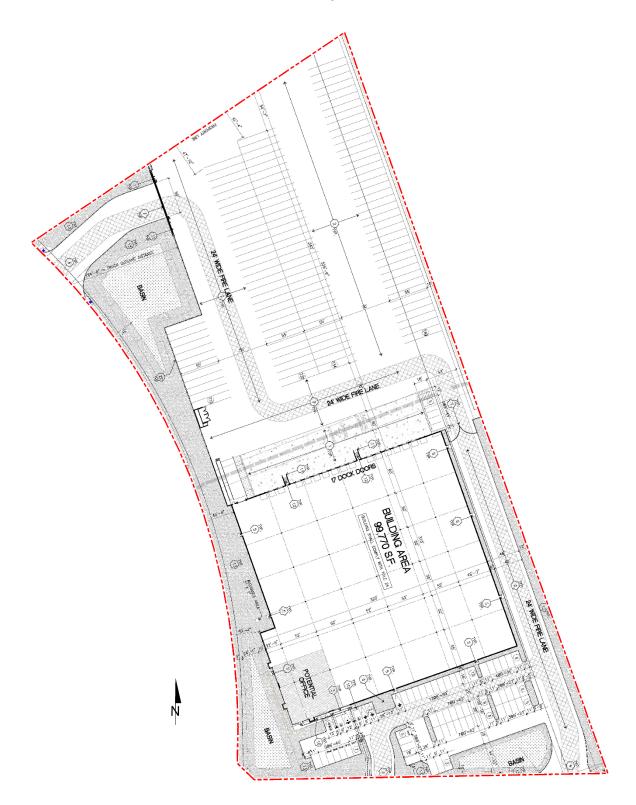


#### **EXHIBIT 1-A: LOCATION MAP**





EXHIBIT 1-B: SITE PLAN



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# 2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

#### 2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (4). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the San Diego Air Basin to the south.

#### 2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO<sub>2</sub>) to sulfates (SO<sub>4</sub>) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent (%) along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.



Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year, there are approximately 10 hours of possible sunshine, and on the longest day of the year, there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO<sub>X</sub>) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

#### 2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.



Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

## 2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (5):

**TABLE 2-1: CRITERIA POLLUTANTS** 

Criteria Pollutant	Description	Sources	Health Effects
Carbon Monoxide (CO)	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O <sub>3</sub> ), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O <sub>2</sub> ) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O <sub>2</sub> transport and competing with O <sub>2</sub> to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O <sub>2</sub> supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O <sub>2</sub> deficiency) as seen at high altitudes.
Sulfur Dioxide (SO <sub>2</sub> )	SO <sub>2</sub> is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant	Coal or oil burning power plants and industries,	A few minutes of exposure to low levels of SO <sub>2</sub> can result in airway constriction in some



Criteria Pollutant	Description	Sources	Health Effects
	mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO <sub>2</sub> oxidizes in the atmosphere, it forms SO <sub>4</sub> . Collectively, these pollutants are referred to as sulfur oxides (SO <sub>X</sub> ).	refineries, diesel engines	asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO <sub>2</sub> . In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO <sub>2</sub> .  Animal studies suggest that despite SO <sub>2</sub> being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.  Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO <sub>2</sub> levels. In these studies, efforts to separate the effects of SO <sub>2</sub> from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.
Oxides of Nitrogen (NO <sub>x</sub> )	NO <sub>x</sub> consist of nitric oxide (NO), nitrogen dioxide (NO <sub>2</sub> ) and nitrous oxide (N <sub>2</sub> O) and are formed when nitrogen (N <sub>2</sub> ) combines with O <sub>2</sub> . Their lifespan in the atmosphere ranges from	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is



Criteria Pollutant	Description	Sources	Health Effects
	one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. NOx is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO2 is the most abundant in the atmosphere. As ambient concentrations of NO2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO2 than those indicated by regional monitoring station.	equipment and residential heating.	associated with long-term exposure to NO2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.  In animals, exposure to levels of NO2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O3 exposure increases when animals are exposed to a combination of O3 and NO2.
Ozone (O <sub>3</sub> )	O <sub>3</sub> is a highly reactive and unstable gas that is formed when VOCs and NO <sub>x</sub> , both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O <sub>3</sub> concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	Formed when reactive organic gases (ROG) and NOx react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for O <sub>3</sub> effects. Short-term exposure (lasting for a few hours) to O <sub>3</sub> at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased



Criteria Pollutant	Description	Sources	Health Effects
		storage and pesticides.	susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O3 levels.  O3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O3 may be more toxic than exposure to O3 alone.  Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter (PM)	PM <sub>10</sub> : A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be	Sources of PM <sub>10</sub> include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO <sub>x</sub> , SO <sub>x</sub> , organics). Incomplete combustion of any fuel.  PM <sub>2.5</sub> comes from	A consistent correlation between elevated ambient fine particulate matter (PM <sub>10</sub> and PM <sub>2.5</sub> ) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In



Criteria Pollutant	Description	Sources	Health Effects
	deposited, resulting in adverse health effects. Additionally, it should be noted that PM <sub>10</sub> is considered a criteria air pollutant.  PM <sub>2.5</sub> : A similar air pollutant to PM <sub>10</sub> consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO <sub>4</sub> formed from SO <sub>2</sub> release from power plants and industrial facilities and nitrates that are formed from NO <sub>x</sub> release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions.  PM <sub>2.5</sub> is a criteria air pollutant.	fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NOx, SOx, organics).	recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer.  Daily fluctuations in PM <sub>2.5</sub> concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter.  The elderly, people with preexisting respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM <sub>10</sub> and PM <sub>2.5</sub> .
Volatile Organic Compounds (VOC)	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O <sub>3</sub> to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the	Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic	Breathing VOCs can irritate the eyes, nose, and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.



Criteria Pollutant	Description	Sources	Health Effects
	solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O <sub>3</sub> , which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	compounds while you are using them, and, to some degree, when they are stored.	
Reactive Organic Gases (ROG)	Similar to VOC, ROGs are also precursors in forming O <sub>3</sub> and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO <sub>x</sub> react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O <sub>3</sub> , which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline.  Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.  Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be



Criteria Pollutant	Description	Sources	Health Effects
	generate a quantifiable amount of Pb emissions.		stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (6).	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.



#### 2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (7).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May ,4 2016 and are presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O<sub>3</sub>, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1 and 24 hour), NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted by CARB. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (8).



TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Pollutant	Averaging	California Standards 1		National Standards <sup>2</sup>			
	Time	Concentration <sup>3</sup>	Method <sup>4</sup>	Primary 3,5	Secondary 3,6	Method 7	
Ozone (O <sub>3</sub> ) <sup>8</sup>	1 Hour	0.09 ppm (180 μg/m³)	Ultraviolet Photometry	=	Same as	Ultraviolet Photometry	
	8 Hour	0.070 ppm (137 μg/m <sup>3</sup> )		0.070 ppm (137 μg/m³)	Primary Standard		
Respirable Particulate Matter (PM10) <sup>9</sup>	24 Hour	50 μg/m³	Gravimetric or	150 μg/m <sup>3</sup>	Same as	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 μg/m <sup>3</sup>	Beta Attenuation	<u> 22—12</u>	Primary Standard		
Fine Particulate Matter (PM2.5) <sup>9</sup>	24 Hour	7 <u>-2</u>	_	35 μg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 μg/m <sup>3</sup>	15 μg/m³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m <sup>3</sup> )		35 ppm (40 mg/m³)	5000	Non-Dispersive Infrared Photometry (NDIR)	
	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m <sup>3</sup> )	553		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )	(NDIK)	2 <u></u> 12	900		
Nitrogen	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase	100 ppb (188 µg/m³)	_	Gas Phase	
Dioxide (NO <sub>2</sub> ) <sup>10</sup>	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	Chemiluminescence	0.053 ppm (100 μg/m³)	Same as Primary Standard	Chemiluminescence	
	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet	75 ppb (196 μg/m³)	_	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)	
Sulfur Dioxide (SO <sub>2</sub> ) <sup>11</sup>	3 Hour	:=			0.5 ppm (1300 µg/m³)		
	24 Hour	0.04 ppm (105 µg/m³)	Fluorescence	0.14 ppm (for certain areas) <sup>11</sup>			
	Annual Arithmetic Mean	::		0.030 ppm (for certain areas) <sup>11</sup>	_		
Lead <sup>12,13</sup>	30 Day Average	1.5 μg/m³		-	-	0	
	Calendar Quarter	-	Atomic Absorption	1.5 µg/m <sup>3</sup> (for certain areas) <sup>12</sup>	Same as	High Volume Sampler and Atomi Absorption	
	Rolling 3-Month Average	-		0.15 μg/m <sup>3</sup>	Primary Standard	701 2000	
Visibility Reducing Particles <sup>14</sup>	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National			
Sulfates	24 Hour	25 μg/m³	Ion Chromatography				
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence				
Vinyl Chloride <sup>12</sup>	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography		, (00000000 <del>00000000</del> )		

For more information please call ARB-PIO at (916) 322-2990

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#### TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

- California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and
  particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be
  equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the
  California Code of Regulations.
- 2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
- 3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of
  the air quality standard may be used.
- 5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
- 8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- 9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 μg/m³ to 12.0 μg/m³. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 μg/m³, as was the annual secondary standard of 15 μg/m³. The existing 24-hour PM10 standards (primary and secondary) of 150 μg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- 10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- 11. On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
  - Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- 12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- 13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- 14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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## 2.6 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb,  $O_3$ , particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), NO<sub>2</sub>, and SO<sub>2</sub> which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (9). On January 5, 2021, CARB posted the 2020 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (10). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB

Criteria Pollutant	State Designation	Federal Designation		
O <sub>3</sub> – 1-hour standard	Nonattainment			
O <sub>3</sub> – 8-hour standard	Nonattainment	Nonattainment		
PM <sub>10</sub>	Nonattainment	Attainment		
PM <sub>2.5</sub>	Nonattainment	Nonattainment		
СО	Attainment	Unclassifiable/Attainment		
NO <sub>2</sub>	Attainment	Unclassifiable/Attainment		
SO <sub>2</sub>	Attainment	Unclassifiable/Attainment		
Pb <sup>1</sup>	Attainment	Unclassifiable/Attainment		

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SCAB

#### 2.7 LOCAL AIR QUALITY

The SCAQMD has designated general forecast areas and air monitoring areas (referred to as Source Receptor Areas [SRA]) throughout the district in order to provide Southern California residents about the air quality conditions. The Project site is located within the Perris Valley area (SRA 24). The Perris Valley monitoring station is located approximately 2.6 miles south of the Project site and reports air quality statistics for O<sub>3</sub> and PM<sub>10</sub>. As the Perris Valley monitoring station does not provide data for CO, NO<sub>2</sub>, or PM<sub>2.5</sub>, the next nearest monitoring stations will be utilized. Data for CO and NO<sub>2</sub> was obtained from the Elsinore Valley monitoring station, located in SRA 25, approximately 11.1 miles southwest of the Project site. The nearest station for PM<sub>2.5</sub> data was obtained from the Metropolitan Riverside County monitoring station which is located approximately 15.6 miles northwest of the Project site in SRA 23. It should be noted that data from Elsinore Valley and Metropolitan Riverside County monitoring stations were utilized in lieu of the Perris Valley monitoring station only in instances where data was not available.

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to



<sup>&</sup>quot;-" = The national 1-hour O<sub>3</sub> standard was revoked effective June 15, 2005.

 $<sup>^{</sup>m 1}$  The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

be representative of the local air quality at the Project site. Data for  $O_3$ , CO,  $NO_2$ ,  $PM_{10}$ , and  $PM_{2.5}$  for 2018 through 2020 was obtained from the SCAQMD Air Quality Data Tables (11). Additionally, data for  $SO_2$  has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure  $SO_2$  concentrations.

**TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2018-2020** 

Dellutent	Chandand	Year							
Pollutant	Standard	2018	2019	2020					
O <sub>3</sub>									
Maximum Federal 1-Hour Concentration (ppm)		0.117	0.118	0.125					
Maximum Federal 8-Hour Concentration (ppm)		0.103	0.095	0.106					
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	31	26	34					
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	67	64	74					
СО									
Maximum Federal 1-Hour Concentration	> 35 ppm	1.1	1.6	0.9					
Maximum Federal 8-Hour Concentration	> 20 ppm	0.8	0.7	0.7					
NO <sub>2</sub>									
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.041	0.038	0.044					
Annual Federal Standard Design Value		0.009	0.007	0.007					
PM <sub>10</sub>									
Maximum Federal 24-Hour Concentration (μg/m³)	> 150 μg/m <sup>3</sup>	64	97	77					
Annual Federal Arithmetic Mean (µg/m³)		29.7	25.3	35.9					
Number of Days Exceeding Federal 24-Hour Standard	> 150 μg/m <sup>3</sup>	0	0	0					
Number of Days Exceeding State 24-Hour Standard	> 50 μg/m <sup>3</sup>	3	4	6					
PM <sub>2.5</sub>									
Maximum Federal 24-Hour Concentration (μg/m³)	> 35 μg/m <sup>3</sup>	50.70	46.70	41.00					
Annual Federal Arithmetic Mean (µg/m³)	> 12 μg/m <sup>3</sup>	12.41	11.13	12.63					
Number of Days Exceeding Federal 24-Hour Standard	> 35 μg/m <sup>3</sup>	2	4	4					

ppm = Parts Per Million

 $\mu g/m^3 = Microgram per Cubic Meter$ 

Source: Data for  $O_3$ , CO,  $NO_2$ ,  $PM_{10}$ , and  $PM_{2.5}$  was obtained from SCAQMD Air Quality Data Tables.

#### 2.8 REGULATORY BACKGROUND

#### 2.8.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for  $O_3$ , CO,  $NO_X$ ,  $SO_2$ ,  $PM_{10}$ , and Pb (12). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB.



The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (13). The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (14) (15). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, CO, PM<sub>2.5</sub>, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O<sub>3</sub> and to adopt a NAAQS for PM<sub>2.5</sub>. Table 2-3 (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and  $NO_X$ .  $NO_X$  is a collective term that includes all forms of  $NO_X$  which are emitted as byproducts of the combustion process.

#### 2.8.2 CALIFORNIA REGULATIONS

#### **CARB**

CARB, which became part of CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for  $SO_4$ , visibility, hydrogen sulfide ( $H_2S$ ), and vinyl chloride ( $C_2H_3Cl$ ). However, at this time,  $H_2S$  and  $C_2H_3Cl$  are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (16) (12).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

Application of Best Available Retrofit Control Technology to existing sources;



- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO<sub>X</sub>, CO and PM<sub>10</sub>. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

#### TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that will be effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide \$1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (17). The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. These require, among other items (18):

#### **NONRESIDENTIAL MANDATORY MEASURES**

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).



- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are
  identified for the depositing, storage, and collection of non-hazardous materials for
  recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic
  waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive
  (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
  - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed
     0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).



- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

#### 2.8.3 AQMP

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMP to meet the state and federal ambient air quality standards (19). AQMPs are updated regularly to ensure an effective reduction in emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.10.

## 2.9 REGIONAL AIR QUALITY IMPROVEMENT

The Project is within the jurisdiction of the SCAQMD. In 1976, California adopted the Lewis Air Quality Management Act which created SCAQMD from a voluntary association of air pollution control districts in Los Angeles, Orange, Riverside, and San Bernardino counties. The geographic area of which SCAQMD consists of is known as the SCAB. SCAQMD develops comprehensive plans and regulatory programs for the region to attain federal standards by dates specified in federal law. The agency is also responsible for meeting state standards by the earliest date achievable, using reasonably available control measures.

SCAQMD rule development through the 1970s and 1980s resulted in dramatic improvement in SCAB air quality. Nearly all control programs developed through the early 1990s relied on (i) the development and application of cleaner technology; (ii) add-on emission controls, and (iii) uniform CEQA review throughout the SCAB. Industrial emission sources have been significantly reduced by this approach and vehicular emissions have been reduced by technologies implemented at the state level by CARB.

As discussed above, the SCAQMD is the lead agency charged with regulating air quality emission reductions for the entire SCAB. SCAQMD created AQMPs which represent a regional blueprint for achieving healthful air on behalf of the 16 million residents of the SCAB. The 2012 AQMP states, "the remarkable historical improvement in air quality since the 1970's is the direct result of Southern California's comprehensive, multiyear strategy of reducing air pollution from all sources as outlined in its AQMPs," (20).

Emissions of O<sub>3</sub>, NO<sub>X</sub>, VOC, and CO have been decreasing in the SCAB since 1975 and are projected to continue to decrease through 2020 (21). These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled



(VMT) in the SCAB continue to increase,  $NO_X$  and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles.  $NO_X$  emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy.  $O_3$  contour maps show that the number of days exceeding the 8-hour NAAQS has generally decreased between 1980 and 2020. For 2020, there was an overall decrease in exceedance days compared with the 1980 period. However, as shown on Table 2-5,  $O_3$  levels have increased in the past three years due to higher temperatures and stagnant weather conditions. Notwithstanding,  $O_3$  levels in the SCAB have decreased substantially over the last 30 years with the current maximum measured concentrations being approximately one-third of concentrations within the late 70's (22).

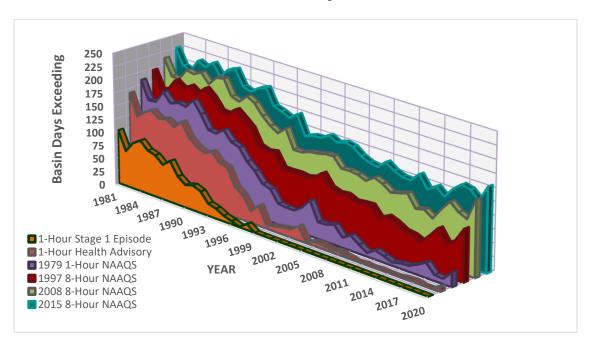


TABLE 2-5: SCAB O<sub>3</sub> TREND

Source: 2020 SCAQMD, Historical O<sub>3</sub> Air Quality Trends (1976-2020)

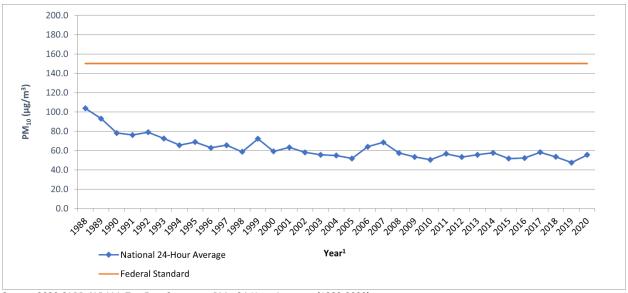
The overall trends of  $PM_{10}$  and  $PM_{2.5}$  levels in the air (not emissions) show an overall improvement since 1975. Direct emissions of  $PM_{10}$  have remained somewhat constant in the SCAB and direct emissions of  $PM_{2.5}$  have decreased slightly since 1975. Area wide sources (fugitive dust from roads, dust from construction, and other sources) contribute the greatest amount of direct particulate matter emissions.

As with other pollutants, the most recent PM $_{10}$  statistics show an overall improvement as illustrated in Tables 2-6 and 2-7. During the period for which data are available, the 24-hour national annual average concentration for PM $_{10}$  decreased by approximately 46%, from 103.7 microgram per cubic meter ( $\mu g/m^3$ ) in 1988 to 55.5  $\mu g/m^3$  in 2020 (23). Although the values are below the federal standard, it should be noted that there are days within the year where the concentrations would exceed the threshold. The 24-hour state annual average for emissions for PM $_{10}$ , have decreased by approximately 64%, from 93.9  $\mu g/m^3$  in 1989 to 33.9  $\mu g/m^3$  in 2020 (23). Although data in the late 1990's show some variability, this is probably due to the advances



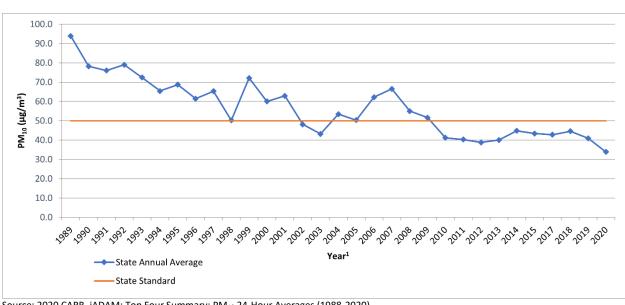
in meteorological science rather than a change in emissions. Similar to the ambient concentrations, the calculated number of days above the 24-hour PM<sub>10</sub> standards has also shown an overall drop.

TABLE 2-6: SCAB AVERAGE 24-HOUR CONCENTRATION PM<sub>10</sub> TREND (BASED ON FEDERAL STANDARD)<sup>1</sup>



Source: 2020 CARB, iADAM: Top Four Summary: PM<sub>10</sub> 24-Hour Averages (1988-2020)

TABLE 2-7: SCAB ANNUAL AVERAGE CONCENTRATION PM<sub>10</sub> TREND (BASED ON STATE STANDARD)<sup>1</sup>



Source: 2020 CARB, iADAM: Top Four Summary: PM<sub>10</sub> 24-Hour Averages (1988-2020)

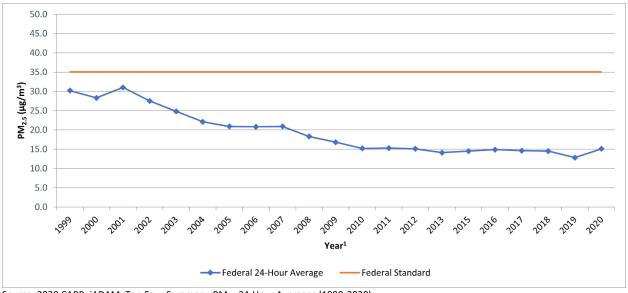


<sup>&</sup>lt;sup>1</sup> Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

<sup>&</sup>lt;sup>1</sup> Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

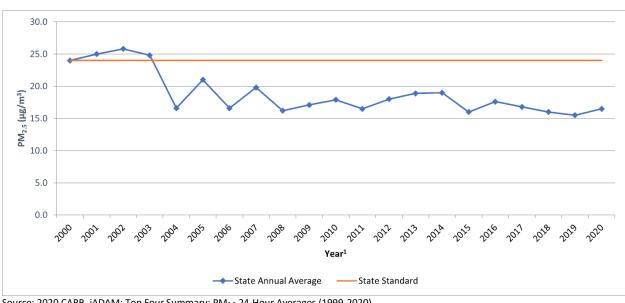
Tables 2-8 and 2-9 shows the most recent 24-hour average PM<sub>2.5</sub> concentrations in the SCAB from 1999 through 2020. Overall, the national and state annual average concentrations have decreased by almost 50% and 31% respectively (23). It should be noted that the SCAB is currently designated as nonattainment for the state and federal PM<sub>2.5</sub> standards.

TABLE 2-8: SCAB 24-HOUR AVERAGE CONCENTRATION PM<sub>2.5</sub> TREND (BASED ON FEDERAL STANDARD)<sup>1</sup>



Source: 2020 CARB, iADAM: Top Four Summary: PM<sub>2.5</sub> 24-Hour Averages (1999-2020)

TABLE 2-9: SCAB ANNUAL AVERAGE CONCENTRATION PM<sub>2.5</sub> TREND (BASED ON STATE STANDARD)<sup>1</sup>



Source: 2020 CARB, iADAM: Top Four Summary: PM<sub>2.5</sub> 24-Hour Averages (1999-2020)



<sup>&</sup>lt;sup>1</sup> Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

<sup>&</sup>lt;sup>1</sup>Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

While the 2012 AQMP  $PM_{10}$  attainment demonstration and the 2015 associated supplemental SIP submission indicated that attainment of the 24-hour standard was predicted to occur by the end of 2015, it could not anticipate the effect of the ongoing drought on the measured  $PM_{2.5}$ .

The 2006 to 2010 base period used for the 2012 attainment demonstration had near-normal rainfall. While the trend of PM<sub>2.5</sub>-equivalent emission reductions continued through 2015, the severe drought conditions contributed to the PM<sub>2.5</sub> increases observed after 2012. As a result of the disrupted progress toward attainment of the federal 24-hour PM<sub>2.5</sub> standard, SCAQMD submitted a request and the EPA approved, in January 2016, a "bump up" to the nonattainment classification from "moderate" to "serious," with a new attainment deadline as soon as practicable, but not beyond December 31, 2019. As of March 14, 2019, the EPA approved portions of a SIP revision submitted by California to address CAA requirements for the 2006 24-hour PM<sub>2.5</sub> NAAQS in the Los Angeles-SCAB Serious PM<sub>2.5</sub> nonattainment area. The EPA also approved 2017 and 2019 motor vehicle emissions budgets for transportation conformity purposes and inter-pollutant trading ratios for use in transportation conformity analyses (24).

In March 2017, the SCAQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (25). Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS) and updated emission inventory methodologies for various source categories (19).

The 2022 AQMP is currently being developed by SCAQMD to address the EPA's strengthened ozone standard. Development of the 2022 AQMP is in its early stages and no formal timeline for completion and adoption is currently known.

The most recent CO concentrations in the SCAB are shown in Table 2-10 (23). CO concentrations in the SCAB have decreased markedly — a total decrease of more about 80% in the peak 8-hour concentration from 1986 to 2012. It should be noted 2012 is the most recent year where 8-hour CO averages and related statistics are available in the SCAB. The number of exceedance days has also declined. The entire SCAB is now designated as attainment for both the state and national CO standards. Ongoing reductions from motor vehicle control programs should continue the downward trend in ambient CO concentrations.



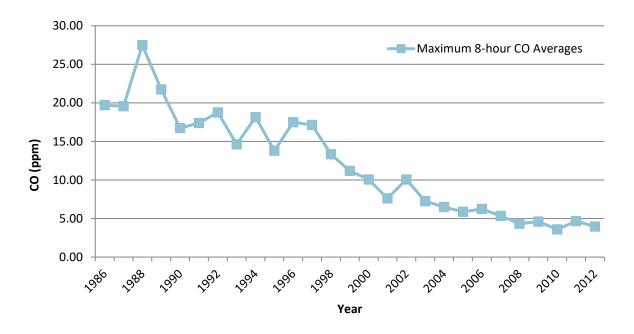


TABLE 2-10: SCAB 8-HOUR AVERAGE CONCENTRATION CO TREND1

Source: 2020 CARB, iADAM: Top Four Summary: CO 8-Hour Averages (1986-2012)

<sup>1</sup> The most recent year where 8-hour concentration data is available is 2012.

Part of the control process of the SCAQMD's duty to greatly improve the air quality in the SCAB is the uniform CEQA review procedures required by SCAQMD's CEQA Air Quality Handbook (1993) (1993 CEQA Handbook) (26). The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the SCAB dramatically improving over the course of the past decades. As stated by the SCAQMD, the District's thresholds of significance are based on factual and scientific data and are therefore appropriate thresholds of significance to use for this Project.

The most recent NO<sub>2</sub> data for the SCAB is shown in Tables 2-11 and 2-12 (23). Over the last 50 years, NO<sub>2</sub> values have decreased significantly; the peak 1-hour national and state averages for 2020 is approximately 80% lower than what it was during 1963. The SCAB attained the State 1-hour NO<sub>2</sub> standard in 1994, bringing the entire state into attainment. A new state annual average standard of 0.030 ppm was adopted by CARB in February 2007 (27). The new standard is just barely exceeded in the SCAQMD. NO<sub>2</sub> is formed from NO<sub>x</sub> emissions, which also contribute to O<sub>3</sub>. As a result, the majority of the future emission control measures would be implemented as part of the overall O<sub>3</sub> control strategy. Many of these control measures would target mobile sources, which account for more than three-quarters of California's NO<sub>x</sub> emissions. These measures are expected to bring the SCAQMD into attainment of the state annual average standard.



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TABLE 2-11: SCAB 1-HOUR AVERAGE CONCENTRATION NO₂ TREND (BASED ON FEDERAL STANDARD)

Source: 2020 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1963-2020)

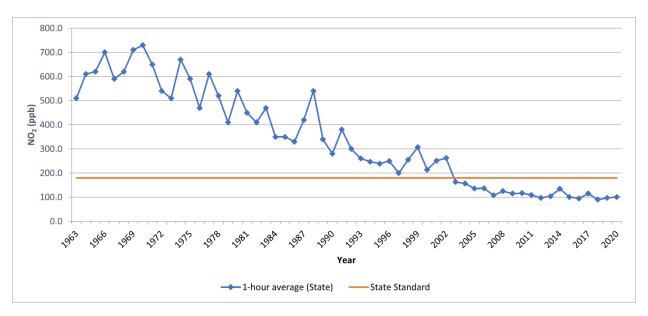


TABLE 2-12: SCAB 1-HOUR AVERAGE CONCENTRATION NO₂ TREND (BASED ON STATE STANDARD)

Source: 2020 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1963-2020)

# 2.9.1 TOXIC AIR CONTAMINANTS (TAC) TRENDS

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary sources, and consumer products. According to the *Ambient and Emission Trends of Toxic Air Contaminants in California* journal article (28) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for



the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene ( $C_6H_6$ ), and 1,3-butadiene ( $C_4H_6$ ); those that are derived from stationary sources: perchloroethylene ( $C_2Cl_4$ ) and hexavalent chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde ( $C_2H_4O$ ) and acetaldehyde ( $C_2H_4O$ )<sup>2</sup>. The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

## **MOBILE SOURCE TACS**

CARB introduced two programs that aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The OBD-II system monitors virtually every component that can affect the emission performance of the vehicle to ensure that the vehicle remains as clean as possible over its entire life and assists repair technicians in diagnosing and fixing problems with the computerized engine controls. If a problem is detected, the OBD-II system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase "Check Engine" or "Service Engine Soon." The system would also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem. CARB has recently developed similar OBD requirements for heavy-duty vehicles over 14,000 pounds (lbs). CARB's phase II Reformulated Gasoline Regulation (RFG-2), adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88% from 1990-2012. 1,3-Butadiene concentrations also declined 85% from 1990-2012 as a result of the use of reformulated gasoline and motor vehicle regulations (28).

In 2000, CARB's Diesel Risk Reduction Plan (DRRP) recommended the replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (<15 ppm) diesel fuel. As a result of these measures, DPM concentrations have declined 68% since 2000, even though the state's population increased 31% and the amount of diesel vehicles miles traveled increased 81%, as shown on Exhibit 2-B. With the implementation of these diesel-related control regulations, CARB expects a DPM decline of 71% for 2000-2020.

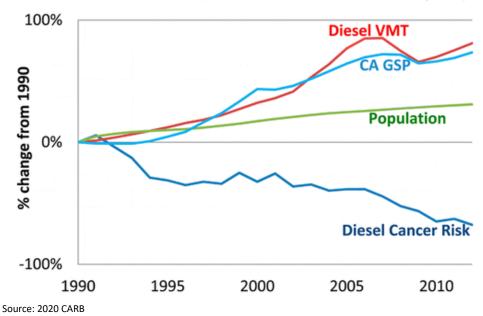
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<sup>&</sup>lt;sup>2</sup> It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

**EXHIBIT 2-A: DPM AND DIESEL VEHICLE MILES TREND** 

# California Population, Gross State Product (GSP), Diesel Cancer Risk, Diesel Vehicle-Miles-Traveled (VMT)



## **DIESEL REGULATIONS**

CARB and the Ports of Los Angeles and Long Beach (POLA and POLB) have adopted several iterations of regulations for diesel trucks that are aimed at reducing DPM. More specifically, CARB Drayage Truck Regulation (29), CARB statewide On-road Truck and Bus Regulation (30), and the Ports of Los Angeles and Long Beach Clean Truck Program (CTP) require accelerated implementation of "clean trucks" into the statewide truck fleet (31). In other words, older more polluting trucks would be replaced with newer, cleaner trucks as a function of these regulatory requirements.

Moreover, the average statewide DPM emissions for Heavy Duty Trucks (HDT), in terms of grams of DPM generated per mile traveled, would dramatically be reduced due to the aforementioned regulatory requirements.

Diesel emissions identified in this analysis would therefore overstate future DPM emissions since not all the regulatory requirements are reflected in the modeling.

#### **CANCER RISK TRENDS**

Based on information available from CARB, overall cancer risk throughout the SCAB has had a declining trend since 1990. In 1998, following an exhaustive 10-year scientific assessment process, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. The SCAQMD initiated a comprehensive urban toxic air pollution study called the Multiple Air Toxics Exposure Study (MATES). DPM accounts for more than 70% of the cancer risk.



In January 2018, as part of the overall effort to reduce air toxics exposure in the SCAB, SCAQMD began conducting the MATES V Program. MATES V field measurements were conducted at ten fixed sites (the same sites selected for MATES III and IV) to assess trends in air toxics levels. MATES V also included measurements of ultrafine particles (UFP) and black carbon (BC) concentrations, which can be compared to the UFP levels measured in MATES IV (32). The final report for the MATES V study was published August 2021. In addition to new measurements and updated modeling results, several key updates were implemented in MATES V. First, MATES V estimates cancer risks by taking into account multiple exposure pathways, which includes inhalation and non-inhalation pathways. This approach is consistent with how cancer risks are estimated in South Coast AQMD's programs such as permitting, Air Toxics Hot Spots (AB2588), and CEQA. Previous MATES studies quantified the cancer risks based on the inhalation pathway only. Second, along with cancer risk estimates, MATES V includes information on the chronic noncancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic non-cancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazard Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time (33).

MATES-V calculated cancer risks based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are within the local area of the Project site. However, MATES-V has extrapolated the excess cancer risk levels throughout the SCAB by modeling the specific grids. The Project is located within a quadrant of the geographic grid of the MATES-V model which predicted a cancer risk of 293 in one million for the area containing the Project site. DPM is included in this cancer risk along with all other TAC sources. As in previous MATES iterations, DPM is the largest contributor to overall air toxics cancer risk. However, the average levels of DPM in MATES V are 53% lower at the 10 monitoring sites compared to MATES IV. Cumulative Project generated TACs are limited to DPM.



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# 3 PROJECT AIR QUALITY IMPACT

# 3.1 Introduction

This study quantifies air quality emissions generated by construction and operation of the Project and addresses whether the Project conflicts with implementation of the SCAQMD's AQMP and Lead Agency planning regulations. The analysis of Project-generated air emissions determines whether the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is in non-attainment under an applicable NAAQS and CAAQS. Additionally, the Project has been evaluated to determine whether the Project would expose sensitive receptors to substantial pollutant concentrations and the impacts of odors. The significance of these potential impacts is described in the following sections.

## 3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at Table 3-1 (34). The SCAQMD's CEQA Air Quality Significance Thresholds (April 2019) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

**TABLE 3-1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS** 

Pollutant	Regional Construction Threshold	Regional Operational Thresholds		
NO <sub>X</sub>	100 lbs/day	55 lbs/day		
VOC	75 lbs/day	55 lbs/day		
PM <sub>10</sub>	150 lbs/day	150 lbs/day		
PM <sub>2.5</sub>	55 lbs/day	55 lbs/day		
SOx	150 lbs/day	150 lbs/day		
со	550 lbs/day	550 lbs/day		
Pb	3 lbs/day	3 lbs/day		

lbs/day = Pounds Per Day



# 3.3 Models Employed To Analyze Air Quality

## 3.3.1 CALEEMOD

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

In May 2022 the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NOx, SOx, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (35). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.3.

## 3.4 CONSTRUCTION EMISSIONS

#### 3.4.1 CONSTRUCTION ACTIVITIES

Construction activities associated with the Project would result in emissions of VOCs, NO<sub>X</sub>, SO<sub>X</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

## **GRADING ACTIVITIES**

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions". Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Grading work of soils would include 1,755 cubic yards of soil import.

## **OFF-SITE UTILITY AND INFRASTRUCTURE IMPROVEMENTS**

In addition, to support the Project development, there will be paving for off-site improvements associated with roadway construction and utility installation for the Project. It is expected that the off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the off-site construction areas would have physical constraints on the amount of daily activity that could occur. The physical



constraints would limit the amount of construction equipment that could be used, and any offsite and utility infrastructure construction would not use equipment totals that would exceed the equipment totals on Table 3-4. As such, no impacts beyond what has already been identified in this report are expected to occur.

#### **ON-ROAD TRIPS**

Construction generates on-road vehicle emissions from vehicle usage for workers and vendors commuting to and from the site. The number of workers and vendor trips are presented below in Table 3-2. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

**Worker Trips Vendor Trips Hauling Trips Construction Activity** Per Day **Per Day Per Day** Site Preparation 18 2 0 23 3 Grading 8 **Building Construction** 42 0 12 **Paving** 15 0 0

8

0

0

**TABLE 3-2: CONSTRUCTION TRIP ASSUMPTIONS** 

## 3.4.2 Construction Duration

**Architectural Coating** 

For purposes of analysis, construction of Project is expected to commence in February 2023 and would last through January 2024. The construction schedule utilized in the analysis, shown in Table 3-3, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent<sup>3</sup>. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (1).

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<sup>&</sup>lt;sup>3</sup> As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3 "Off-Road Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

**TABLE 3-3: CONSTRUCTION DURATION** 

Construction Activity	Start Date End Date		Days
Site Preparation	02/01/2023	02/21/2023	15
Grading	02/21/2023	03/31/2023	29
Building Construction	04/01/2023	09/30/2023	130
Paving	04/01/2023	11/30/2023	174
Architectural Coating	12/01/2023	01/31/2024	44

## 3.4.3 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-4 would operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the County Code. In accordance with the County of Riverside Good Neighbor Policy for Logistics and Warehouse/Distribution uses, it was assumed that equipment rated 50 or less horsepower would meet at least CARB Tier 3 emissions standards, and equipment rated more than 50 horsepower would meet at least CARB Tier 4 Interim emissions standards.

**TABLE 3-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS** 

Construction Activity	Equipment <sup>1</sup>	Amount	Hours Per Day
Cita Duna anatian	Rubber Tired Dozers	3	8
Site Preparation	Crawler Tractors	4	8
	Graders	1	8
	Excavators	1	8
Grading	Crawler Tractors	3	8
	Rubber Tired Dozers	1	8
	Scrapers	3	8
	Forklifts	5	8
	Generator Sets	2	8
Building Construction	Cranes	2	8
	Welders	2	8
	Crawler Tractors	5	8
	Pavers	2	8
Pavers	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

<sup>&</sup>lt;sup>1</sup> In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes during the site preparation and grading phases of Project construction.



#### 3.4.4 Construction Emissions Summary

## **IMPACTS WITHOUT MITIGATION**

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-5. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed the thresholds established by the SCAQMD for emissions of any criteria pollutant.

TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITHOUT MITIGATION

Vacu	Emissions (lbs/day)							
Year	voc	NOx	со	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>		
	Summer							
2023	4.96	41.40	44.10	0.07	3.25	2.42		
2024	n/a	n/a	n/a	n/a	n/a	n/a		
		Winter						
2023	13.00	100.00	81.50	0.14	14.50	8.53		
2024	13.00	1.21	1.53	< 0.005	0.14	0.06		
Maximum Daily Emissions	13.00	100.00	81.50	0.14	14.50	8.53		
SCAQMD Regional Threshold	75	100	550	150	150	55		
Threshold Exceeded?	NO	NO	NO	NO	NO	NO		

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1.

## 3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project would result in emissions of VOCs, NO<sub>X</sub>, SO<sub>X</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Operational emissions are expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions
- Stationary Source Emissions

#### 3.5.1 AREA SOURCE EMISSIONS

# **ARCHITECTURAL COATINGS**

Over a period of time the buildings that are part of this Project would require maintenance and would therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. The emissions associated with architectural coatings were calculated using CalEEMod.



#### **CONSUMER PRODUCTS**

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within CalEEMod.

## LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

#### 3.5.2 ENERGY SOURCE EMISSIONS

## **COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY**

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod.

## **3.5.3** Mobile Source Emissions

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *BCI IV Harvill Industrial Center (PPT220001) Traffic Analysis* were utilized in this analysis (36). Per the *BCI IV Harvill Industrial Center (PPT220001) Traffic Analysis*, the proposed light industrial use (Option A) is expected to generate approximately 594 total trips per day which include 486 passenger car trips per day and 108 truck trips per day. If the proposed building were to be occupied by a warehouse user (Option B), the Project would generate 278 two-way trips per day which include 112 passenger car trips per day and 60 truck trips per day.

## **APPROACH FOR ANALYSIS OF THE PROJECT**

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses. For the proposed industrial uses, it is important to note that although the *BCI IV Harvill Industrial Center (PPT220001) Traffic Analysis* does not breakdown passenger cars by type, this analysis assumes that passenger cars



include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1<sup>4</sup> & LDT2<sup>5</sup>), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. In order to account for emissions generated by passenger cars, the fleet mix in Table 3-6 was utilized.

**TABLE 3-6: PASSENGER CAR FLEET MIX** 

Lond Hee	% Vehicle Type							
Land Use	LDA	LDT1	LDT2	MDV	MCY			
General Light Industrial (Option A)								
Warehousing (Option B)	55.76%	4.52%	22.17%	15.30%	2.25%			
Truck Trailer Yard (Option A & Option B)								

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicle types.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated SCAQMD recommended truck trip length 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-axle (MHDT) trucks and 40 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages taken from the *BCI IV Harvill Industrial Center (PPT220001) Traffic Analysis*. The trip length function for the general light industrial use (Option A) has been conservatively calculated to 30.18 miles, the warehousing industrial use (Option B) to 30.66 miles and the truck trailer yard to 26.32 miles, with an assumption of 100% primary trips for the proposed industrial land uses. This trip length assumption is higher than the CaalEEMod defaults for trucks. In order to be consistent with the *BCI IV Harvill Industrial Center (PPT220001) Traffic Analysis*, trucks are broken down by truck type. The truck fleet mix is estimated by rationing the trip rates for each truck type based on information provided in the *BCI IV Harvill Industrial Center (PPT220001) Traffic Analysis*. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1<sup>6</sup> & LHDT2<sup>7</sup>)/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle, and Heavy-Heavy-Duty Trucks (HHDT)/4+-axle. To account for emissions generated by trucks, the following fleet mix was utilized in this analysis:

**TABLE 3-7: TRUCK FLEET MIX** 

Lond Hoo	% Vehicle Type						
Land Use	LHDT1	LHDT2	MHDT	HHDT			
General Light Industrial (Option A)	12.00%	3.39%	23.08%	61.54%			
Warehousing (Option B)	13.00%	3.67%	20.00%	63.33%			
Truck Trailer Yard (Option A & Option B)	15.22%	4.30%	34.15%	46.34%			

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.



<sup>&</sup>lt;sup>4</sup> Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

<sup>&</sup>lt;sup>5</sup> Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

 $<sup>^{\</sup>rm 6}$  Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

<sup>&</sup>lt;sup>7</sup> Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

#### FUGITIVE DUST RELATED TO VEHICULAR TRAVEL

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of brake and tire wear particulates. The emissions estimate for travel on paved roads were calculated using CalEEMod.

## 3.5.4 On-Site Cargo Handling Equipment Source Emissions

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to one (1) 175 horsepower (hp), natural gas-powered cargo handling equipment – port tractor operating 4 hours a day<sup>8</sup> for 365 days of the year.

## 3.5.5 OPERATIONAL EMISSIONS SUMMARY

As previously stated, CalEEMod utilizes summer and winter EMFAC2021 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. Detailed operation model outputs for the Project are presented in Appendix 3.2 and 3.3. As shown on Table 3-8 and 3-9, for Option A or Option B, the daily regional emissions from ongoing operations will not exceed any of the thresholds of significance.

#### **OPTION A**

As shown on Table 3-8, for Option A, the daily regional emissions from on-going operations will not exceed any of the thresholds of significance. Detailed operation model outputs are presented in Appendix 3.2.

TABLE 3-8: EMISSIONS FROM LIGHT INDUSTRIAL USE (OPTION A)

Course	Emissions (lbs/day)					
Source	voc	NOx	со	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer						
Area Source	2.25	7.59	31.20	0.11	3.22	0.69
Energy Source	3.16	0.04	4.34	< 0.005	0.01	0.01
Mobile Source	0.06	1.15	0.97	0.01	0.09	0.09
On-Site Equipment Source	0.12	0.38	16.44	0.00	0.03	0.03
Total Maximum Daily Emissions	5.59	9.16	52.95	0.12	3.35	0.82
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

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<sup>&</sup>lt;sup>8</sup> Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

Course	Emissions (lbs/day)						
Source	voc	NOx	со	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	
	Winter						
Area Source	2.15	8.02	25.60	0.11	3.22	0.69	
Energy Source	2.44	0.00	0.00	0.00	0.00	0.00	
Mobile Source	0.06	1.15	0.97	0.01	0.09	0.09	
On-Site Equipment Source	0.12	0.38	16.44	0.00	0.03	0.03	
Total Maximum Daily Emissions	4.77	9.55	43.01	0.12	3.34	0.81	
SCAQMD Regional Threshold	55	55	550	150	150	55	
Threshold Exceeded?	NO	NO	NO	NO	NO	NO	

Source: CalEEMod operational-source emissions are presented in Appendix 3.2.

# **OPTION B**

As shown on Table 3-9, for Option B, the daily regional emissions from on-going operations will not exceed any of the thresholds of significance. Detailed operation model outputs are presented in Appendix 3.3.

TABLE 3-9: EMISSIONS FROM WAREHOUSING USE (OPTION B)

Course		Emissions (lbs/day)					
Source	voc	NOx	со	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	
		Summer					
Area Source	0.82	8.93	10.90	0.09	1.95	0.51	
Energy Source	3.14	0.04	4.34	< 0.005	0.01	0.01	
Mobile Source	0.03	0.51	0.43	< 0.005	0.04	0.04	
On-Site Equipment Source	0.12	0.38	16.44	0.00	0.03	0.03	
Total Maximum Daily Emissions	4.11	9.86	32.11	0.09	2.03	0.59	
SCAQMD Regional Threshold	55	55	550	150	150	55	
Threshold Exceeded?	NO	NO	NO	NO	NO	NO	
		Winter					
Area Source	0.78	9.35	9.33	0.09	1.95	0.51	
Energy Source	2.43	0.00	0.00	0.00	0.00	0.00	
Mobile Source	0.03	0.51	0.43	< 0.005	0.04	0.04	
On-Site Equipment Source	0.12	0.38	16.44	0.00	0.03	0.03	
Total Maximum Daily Emissions	3.36	10.24	26.20	0.09	2.02	0.58	
SCAQMD Regional Threshold	55	55	550	150	150	55	
Threshold Exceeded?	NO	NO	NO	NO	NO	NO	

Source: CalEEMod operational-source emissions are presented in Appendix 3.3.



# 3.6 LOCALIZED SIGNIFICANCE

#### **BACKGROUND ON LST DEVELOPMENT**

The analysis makes use of methodology included in the SCAQMD Final Localized Significance Threshold Methodology (LST Methodology). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-49. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (37).

#### APPLICABILITY OF LSTs FOR THE PROJECT

For this Project, the appropriate SRA for the LST analysis is the SCAQMD Perris Valley (SRA 24). LSTs apply to CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- Identify the maximum daily on-site emissions that would occur during construction activity:
  - The maximum daily on-site emissions could be based on information provided by the Project Applicant; or
  - The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds and CalEEMod User's Guide Appendix A: Calculation Details for CalEEMod can be used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod (38) (39).
- If the total acreage disturbed is less than or equal to 5 acres per day, then the SCAQMD's screening
  look-up tables are utilized to determine if a Project has the potential to result in a significant
  impact. The look-up tables establish a maximum daily emissions threshold in lbs/day that can be
  compared to CalEEMod outputs.

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<sup>&</sup>lt;sup>9</sup> The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "...equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

- If the total acreage disturbed is greater than 5 acres per day, then LST impacts may still be conservatively evaluated using the LST look-up tables for a 5-acre disturbance area. Use of the 5-acre disturbance area thresholds can be used to show that even if the daily emissions from all construction activity were emitted within a 5-acre area, and therefore concentrated over a smaller area which would result in greater site adjacent concentrations, the impacts would still be less than significant if the applicable 5-acre thresholds are utilized.
- The LST Methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

#### **EMISSIONS CONSIDERED**

Based on SCAQMD's LST Methodology, emissions for concern during construction activities are on-site NO<sub>X</sub>, CO, PM<sub>2.5</sub>, and PM<sub>10</sub>. The LST Methodology clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (40)." As such, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

## **MAXIMUM DAILY DISTURBED-ACREAGE**

The "acres disturbed" for analytical purposes are based on specific equipment type for each subcategory of construction activity and the estimated maximum area a given piece of equipment can pass over in an 8-hour workday (as shown on Table 3-9). The equipment-specific grading rates are summarized in the SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds and CalEEMod User's Guide Appendix A: Calculation Details for CalEEMod (38) (41). The disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day. Based on Table 3-10, the Project's construction activities could actively disturb approximately 3.5 acres per day during site preparation and 5.5 acres per day during grading activities.

It should be noted that in CalEEMod, the Total Acres Graded (TAG) field represents the cumulative distance traversed on the property by the grading equipment. In order to properly grade a piece of land, multiple passes with grading equipment may be required. So even though the lot size is a fixed number of acres, the TAG could be an order of magnitude higher than the footprint of the lot (41). Total Acres Graded (TAG) is a function of the maximum acreage disturbed per day times the number of days of the subphase of construction. As such, the TAG is 52.5 acre (3.5 acre per day x 15 days) for site preparation and 159.5 acres (5.5 acres per day x 29 days) for grading. <sup>10</sup>

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 $<sup>^{10}</sup>$  CalEEMod does not provide a "Total Acres Graded" field for Demolition, Building Construction, Paving, or Architectural Coating activities.

**TABLE 3-10: MAXIMUM DAILY DISTURBED-ACREAGE** 

Construction Activity	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Site Proparation	Crawler Tractors	4	0.5	8	2.0
Site Preparation	Rubber Tired Dozers	3	0.5	8	1.5
Total acres disturbed	per day during Site Prepa	aration			3.5
	Crawler Tractors	3	0.5	8	1.5
Condina	Graders	1	0.5	8	0.5
Grading	Rubber Tired Dozers	1	0.5	8	0.5
	Scrapers	3	1.0	8	3.0
Total acres disturbed per day during Grading					

Source: Maximum daily disturbed acreage based on equipment list presented in Appendix 3.1.

#### **RECEPTORS**

As previously stated, LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest residence or sensitive receptor. Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as "sensitive receptors". These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the Project site has been used to determine construction and operational air quality impacts for emissions of PM<sub>10</sub> and PM<sub>2.5</sub>, since PM<sub>10</sub> and PM<sub>2.5</sub> thresholds are based on a 24-hour averaging time.

LSTs apply, even for non-sensitive land uses, consistent with *LST Methodology* and SCAQMD guidance. Per the *LST Methodology*, commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for 8 hours or less. However, *LST Methodology* explicitly states that "*LSTs based on shorter averaging periods, such as the NO2 and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours (40)." Therefore, any adjacent land use where an individual could remain for 1 or 8-hours, that is located at a closer distance to the Project site than the receptor used for PM<sub>10</sub> and PM<sub>2.5</sub> analysis, must be considered to determine construction and operational LST air impacts for emissions of NO<sub>2</sub> and CO since these pollutants have an averaging time of 1 and 8-hours.* 



#### PROJECT-RELATED RECEPTORS

Receptors in the Project study area are described below and shown on Exhibit 3-A. Localized air quality impacts were evaluated at sensitive receptor land uses nearest the Project site. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site. The selection of receptor locations is based on Federal Highway Administration (FHWA) guidelines and is consistent with additional guidance provided by Caltrans and the Federal Transit Administration (FTA).

- R1: Location R1 represents the Val Verde High School at 972 Morgan Street, approximately 757 feet east of the Project site. Receptor R1 is limited to daytime use with no planned nighttime receptors and is placed at the building façade.
- R2: Location R2 represents the vacant residence at 19542 Patterson Avenue, approximately 413 feet southwest of the Project site. Since there are no private outdoor living areas facing the Project site, receptor R2 is placed at the building façade.
- R3: Location R3 represents the existing residence at 23451 Cajalco Road, approximately 612 feet southwest of the Project site. R3 is placed in the private outdoor living areas (backyard) facing the Project site.
- R4: Location R4 represents the Marriot Fairfield Hotel at 19310 Harvill Avenue, approximately 119 feet north of the Project site. Since there are no private outdoor living areas facing the Project site, receptor R4 is placed at the building façade.
- R5: Location R5 represents the California Trusframe, LLC manufacturing facility at 23665 Cajalco Road, approximately 95 feet south of the Project site.

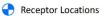
The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual a cumulatively significant impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of  $PM_{10}$  and  $PM_{2.5}$  (since  $PM_{10}$  and  $PM_{2.5}$  thresholds are based on a 24-hour averaging time). The nearest receptor used for evaluation of localized impacts of  $PM_{10}$  and  $PM_{2.5}$  is the Marriot Fairfield Hotel at 19310 Harvill Avenue, represented by R4, approximately 119 feet (36 meters) north of the Project site. As such, a 36-meter distance will be used for evaluation of localized  $PM_{10}$  and  $PM_{2.5}$ .

As previously stated, and consistent with LST Methodology, the nearest commercial/industrial use to the Project site is used to determine construction and operational LST air impacts for emissions of  $NO_X$  and CO as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assumed that an individual could be present at these sites for periods of one to 8 hours. The nearest receptor used for evaluation of localized impacts of  $NO_X$  and CO is the California Trusframe, LLC manufacturing facility at 23665 Cajalco Road, represented by R5, approximately 95 feet (29 meters) south of the Project site. As such, a 29-meter distance will be used for evaluation of localized  $NO_X$  and CO.



757' Site  $\mathbb{R}^2$ 

**EXHIBIT 3-A: RECEPTOR LOCATIONS** 





**LEGEND:** 

Distance from receptor to Project site boundary (in feet)



# 3.7 CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

#### 3.7.1 LOCALIZED THRESHOLDS FOR CONSTRUCTION ACTIVITY

As previously stated, the total acreage disturbed is 3.5 acre per day for site preparation and 5.5 acres per day grading activities. This analysis relies on the SCAQMD's screening look-up tables to determine impacts. It should be noted that since the look-up tables identify thresholds at only 1 acre, 2 acres, and 5 acres, in order to use linear regression to determine localized significance thresholds, this analysis assumes that up to 5 acres can be disturbed during grading activities. This approach is conservative as it assumes that all on-site emissions associated with the Project would occur within a concentrated 5-acre area. This screening method would therefore overpredict potential localized impacts, because by assuming that on-site construction activities are occurring over a smaller area, the resulting concentrations of air pollutants are more highly concentrated once they reach the smaller site boundary than they would be for activities if they were spread out over a larger surface area. On a larger site, the same amount of air pollutants generated would disperse over a larger surface area and would result in a lower concentration once emissions reach the project-site boundary. As such, LSTs for a 5-acre site during construction are used as a screening tool to determine if further detailed analysis is required. Consistent with SCAQMD guidance, the thresholds presented in Table 3-11 were calculated by interpolating the threshold values for the Project's disturbed acreage.

TABLE 3-11: MAXIMUM DAILY LOCALIZED CONSTRUCTION EMISSIONS THRESHOLDS

Construction Activity	Construction Localized Thresholds					
Construction Activity	NOx	со	PM <sub>10</sub>	PM <sub>2.5</sub>		
Site Preparation	225 lbs/day	1,308 lbs/day	19 lbs/day	7 lbs/day		
Grading	292 lbs/day	1,795 lbs/day	27 lbs/day	10 lbs/day		

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

# 3.7.2 CONSTRUCTION-SOURCE LOCALIZED EMISSIONS

## **IMPACTS WITHOUT MITIGATION**

Table 3-12 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Without mitigation, localized construction emissions would not exceed the applicable SCAQMD LSTs for emissions of any criterial pollutant. Outputs from the model runs for unmitigated construction LSTs are provided in Appendix 3.1.



TABLE 3-12: LOCALIZED CONSTRUCTION-SOURCE EMISSIONS – WITHOUT MITIGATION

Construction	Vaar	Scenario		Emissions (lbs/day)				
Activity	Year	Scenario	NOx	со	PM <sub>10</sub>	PM <sub>2.5</sub>		
		Summer	n/a	n/a	n/a	n/a		
		Winter	47.00	38.00	8.19	5.02		
Site Preparation	2023	Maximum Daily Emissions	47.00	38.00	8.19	5.02		
reparation	Freparation	SCAQMD Localized Threshold	225	1,308	19	7		
		Threshold Exceeded?	NO	NO	NO	NO		
		Summer	n/a	n/a	n/a	n/a		
		Winter	52.00	40.50	5.59	3.32		
Grading	2023	Maximum Daily Emissions	52.00	40.50	5.59	3.32		
	SCAQMD Localized Threshold	292	1,795	27	10			
		Threshold Exceeded?	NO	NO	NO	NO		

Source: CalEEMod unmitigated localized construction-source emissions are presented in Appendix 3.1.

# 3.8 OPERATIONAL-SOURCE EMISSIONS LST ANALYSIS

As previously stated, the Project is located on an approximately 9.13-acre parcel. As noted previously, the *LST Methodology* provides look-up tables for sites with an area with daily disturbance of 5 acres or less. For projects that exceed 5 acres, the 5-acre LST look-up tables can be used as a screening tool to determine whether pollutants require additional detailed analysis. This approach is conservative as it assumes that all on-site emissions associated with the Project would occur within a concentrated 5-acre area. This screening method would therefore overpredict potential localized impacts, because by assuming that on-site operational activities are occurring over a smaller area, the resulting concentrations of air pollutants are more highly concentrated once they reach the smaller site boundary than they would be for activities if they were spread out over a larger surface area. On a larger site, the same amount of air pollutants generated would disperse over a larger surface area and would result in a lower concentration once emissions reach the project-site boundary. As such, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

The LST analysis generally includes on-site sources (area, energy, mobile, on-site cargo handling equipment, and stationary equipment – are previously discussed in Section 3.5 of this report). However, it should be noted that the CalEEMod outputs do not separate on-site and off-site emissions from mobile sources. As such, in an effort to establish a maximum potential impact scenario for analytic purposes, the emissions shown on Table 3-14 and 3-15 represent all on-site Project-related stationary (area) sources and Project-related mobile sources. It should be noted that the longest on-site distance is roughly 0.85 mile for both trucks and passenger cars. Modeling based on these assumptions demonstrates that even within broad encompassing parameters, Project operational-source emissions would not exceed applicable LSTs.



#### 3.8.1 LOCALIZED THRESHOLDS FOR OPERATIONAL ACTIVITY

As previously stated, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

TABLE 3-13: MAXIMUM DAILY LOCALIZED OPERATIONAL EMISSIONS THRESHOLDS

Operational Localized Thresholds				
NOx	со	PM <sub>10</sub>	PM <sub>2.5</sub>	
275 lbs/day	1,673 lbs/day	7 lbs/day	2 lbs/day	

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

## 3.8.2 OPERATIONAL-SOURCE LOCALIZED EMISSIONS

#### **IMPACTS WITHOUT MITIGATION**

As shown on Tables 3-14 and 3-15, for Option A or Option B, operational emissions would not exceed the LST thresholds for the nearest sensitive receptor. Therefore, the Project would have a less than significant localized impact during operational activity for both land uses.

TABLE 3-14: LIGHT INDUSTRUAL (OPTION A) LOCALIZED SIGNIFICANCE SUMMARY OF OPERATIONS

Canadia	Emissions (lbs/day)				
Scenario	NOx	со	PM <sub>10</sub>	PM <sub>2.5</sub>	
Summer	3.09	26.71	0.29	0.16	
Winter	3.14	22.63	0.28	0.15	
Maximum Daily Emissions	3.14	26.71	0.29	0.16	
SCAQMD Localized Threshold	275	1,673	7	2	
Threshold Exceeded?	NO	NO	NO	NO	

Source: CalEEMod localized operational-source emissions are presented in Appendix 3.4.

TABLE 3-15: WAREHOUSING (OPTION B) LOCALIZED SIGNIFICANCE SUMMARY OF OPERATIONS

Scenario	Emissions (lbs/day)				
Scenario	NOx	со	PM <sub>10</sub>	PM <sub>2.5</sub>	
Summer	2.27	6.99	0.13	0.07	
Winter	2.32	2.76	0.13	0.06	
Maximum Daily Emissions	2.32	6.99	0.13	0.07	
SCAQMD Localized Threshold	275	1,673	7	2	
Threshold Exceeded?	NO	NO	NO	NO	

Source: CalEEMod localized operational-source emissions are presented in Appendix 3.5.



# 3.9 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific CO "hot spots" is not needed to reach this conclusion. An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards, as shown on Table 3-16.

**TABLE 3-16: CO MODEL RESULTS** 

Intersection Location	CO Concentrations (ppm)			
intersection Location	Morning 1-hour	Afternoon 1-hour	8-hour	
Wilshire Boulevard/Veteran Avenue	4.6	3.5	3.7	
Sunset Boulevard/Highland Avenue	4	4.5	3.5	
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.2	
Long Beach Boulevard/Imperial Highway	3	3.1	8.4	

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations

Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 8.4 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (42). In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

The ambient 1-hr and 8-hr CO concentration within the Project study area is estimated to be 0.9 ppm and 0.7 ppm, respectively (data from Elsinore Valley station for 2020). Therefore, even if the traffic volumes for the proposed Project were double or even triple of the traffic volumes



generated at the Long Beach Blvd. and Imperial Hwy. intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (43). Traffic volumes generating the CO concentrations for the "hot spot" analysis is shown on Table 3-17. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vph and AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively (42). The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm)<sup>11</sup>.

**TABLE 3-17: TRAFFIC VOLUMES** 

	Peak Traffic Volumes (vph)				
Intersection Location	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

As summarized on Table 3-18 below, the intersection of I-215 Northbound (NB) Ramps and Ramona Expressway would have the highest AM and PM traffic volumes of 6,288 vph and 7,220 vph, respectively. As such, total traffic volumes at the intersections considered are less than the traffic volumes identified in the 2003 AQMP. As such, the Project considered herein along with background and cumulative development would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study or based on representative BAAQMD CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.



<sup>&</sup>lt;sup>11</sup> Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm)

**TABLE 3-18: PEAK HOUR TRAFFIC VOLUMES** 

	Peak Traffic Volumes (vph)				
Intersection Location	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
Harvill Avenue/Cajalco Expressway	961/1,121	652/1,273	1,138/1,576	2,326/1,613	5,078/5,583
I-215 SB Ramps/Ramona Expressway	0/0	2,199/2,217	1,124/2,332	2,116/1,847	5,439/6,396
I-215 NB Ramps/Ramona Expressway	1,430/1,016	0/0	2,217/3,360	2,641/2,844	6,288/7,220
I-215 NB Ramps/Placentia Avenue	719/567	0/0	907/1,345	854/1,332	2,479/3,244

SB = Southbound

Source: BCI IV Harvill Industrial Center (PPT220001) Traffic Analysis (Urban Crossroads, Inc., 2022)

# 3.10 AQMP

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In March 2017, the SCAQMD released the *Final 2016 AQMP* (2016 AQMP). The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (44). Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS), a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (19). The Project's consistency with the AQMP will be determined using the 2016 AQMP as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the 1993 CEQA Handbook (45). These indicators are discussed below:



#### 3.10.1 Consistency Criterion No. 1

The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that Consistency Criterion No. 1 refer to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

# Construction Impacts - Consistency Criterion 1

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized or regional significance thresholds were exceeded. As evaluated, the Project's localized and regional construction-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

## Operational Impacts - Consistency Criterion 1

As evaluated, the Project's localized and regional operation-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

#### 3.10.2 CONSISTENCY CRITERION NO. 2

# The Project will not exceed the assumptions in the AQMP based on the years of Project buildout phase.

The 2016 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in County of Riverside General Plan is considered to be consistent with the AQMP.

# Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.



# Operational Impacts – Consistency Criterion 2

The Project site is located within an unincorporated portion of the County of Riverside. As per the General Plan, the unincorporated portions of the County are divided into 19 area plans. These area plans provide more detailed land use and policy direction regarding local issues such as land use, circulation, open space, and other topical areas (46). Per the General Plan, the Project site is located within the Mead Valley Area Plan and is designated for Light Industrial uses. The General Plan states that the Light Industrial land use designation is intended for industrial and related uses including warehousing/distribution, assembly and light manufacturing, repair facilities, and supporting retail uses at an allowable Floor Area Ratio (FAR) of 0.25-0.60 (46).

As previously stated, the Project proposes to construct 99,770 sf of general light industrial use with a 118-stall truck parking lot. Since future tenants are unknown, the analysis herein considers two options for the proposed building. "Option A" considers the development of 99,770 square feet (sf) of industrial use with a 118-stall truck parking lot. "Option B" considers the development of 99,770 square feet (sf) of warehouse use with a 118-stall truck parking lot. As such, the Project's proposed uses are generally consistent with the site's land use and zoning designations.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

#### **AQMP CONSISTENCY CONCLUSION**

The Project would not result in or cause NAAQS or CAAQS violations. Additionally, the proposed Project is consistent with the land use and growth intensities reflected in the adopted General Plan. Furthermore, the Project would not exceed any applicable regional or local thresholds. As such, the Project is therefore considered to be consistent with the AQMP.

# 3.11 TOXIC AIR CONTAMINANTS

#### **CONSTRUCTION AND OPERATIONAL**

Based on the results of the *BCI IV Harvill Industrial Center (PPT220001) Health Risk Assessment* (47), emissions generated from the Project during short-term construction and long-term operation will not exceed SCAQMD significance thresholds for cancer and non-cancer health risks. As such, a less than significant impact is expected.

## 3.12 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the Project would not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

Additionally, the Project would not exceed the SCAQMD localized significance thresholds during operational activity. Further Project traffic would not create or result in a CO "hotspot." Lastly, the Project will not exceed SCAQMD significance thresholds for cancer and non-cancer health risks during construction and operational activity. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.



#### 3.12.1 FRIANT RANCH CASE

In December 2018, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal.5<sup>th</sup> 502, the California Supreme Court held that an Environmental Impact Report's (EIR) air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided.

Most local agencies, including the County of Riverside, lack the data to do their own assessment of potential health impacts from criteria air pollutant emissions, as would be required to establish customized, locally-specific thresholds of significance based on potential health impacts from an individual development project. The use of national or "generic" data to fill the gap of missing local data would not yield accurate results because such data does not capture local air patterns, local background conditions, or local population characteristics, all of which play a role in how a population experiences air pollution. Because it is impracticable to accurately isolate the exact cause of a human disease (for example, the role a particular air pollutant plays compared to the role of other allergens and genetics in causing asthma), existing scientific tools cannot accurately estimate health impacts of the Project's air emissions without undue speculation. Instead, readers are directed to the Project's air quality impact analysis above, which provides extensive information concerning the quantifiable and non-quantifiable health risks related to the Project's construction and long-term operation.

Notwithstanding, this AQIA does evaluate the proposed Project's localized impact to air quality for emissions of CO, NOx, PM<sub>10</sub>, and PM<sub>2.5</sub> by comparing the proposed project's on-site emissions to the SCAQMD's applicable LST thresholds. The LST analysis above determined that the Project would not result in emissions exceeding SCAQMD's LSTs. Therefore, the proposed Project would not be expected to exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NOx, PM<sub>10</sub>, and PM<sub>2.5</sub>.

As the Project's emissions would comply with federal, state, and local air quality standards, the proposed Project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level and would not provide a reliable indicator of health effects if modeled.

# **3.13 ODORS**

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills



- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with current solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors and other emissions (such as those leading to odors) associated with construction and operations activities of the proposed Project would be less than significant and no mitigation is required (48).

# 3.14 CUMULATIVE IMPACTS

As previously shown in Table 2-3, the CAAQS designate the Project site as nonattainment for  $O_3$  PM<sub>10</sub>, and PM<sub>2.5</sub> while the NAAQS designates the Project site as nonattainment for  $O_3$  and PM<sub>2.5</sub>.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (49). In this report the SCAQMD clearly states (Page D-3):

"...the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."



Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

#### **CONSTRUCTION IMPACTS**

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project construction-source emissions would be considered less than significant on a Project-specific and cumulative basis.

#### **OPERATIONAL IMPACTS**

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operation-source air pollutant emissions would not result in exceedances of regional thresholds for Option A or Option B. Therefore, proposed Project operation-source emissions would be considered less than significant on a project-specific and cumulative basis.

## **COUNTY OF RIVERSIDE GOOD NEIGHBOR POLICY**

The County of Riverside adopted the Good Neighbor Policy for Logistics and Warehouse/Distribution Uses (Policy Number F-3) on November 19, 2019. (50) The goal of this policy is to provide a framework through which large-scale logistics and warehouse projects can be designed and operated in a way that lessens any impacts on surrounding communities and the environment. The policy applies to logistics warehouse projects that include any building larger than 250,000 square feet in size with more than 20 loading bays. As such, although the Project complies with the policy, the policy is in fact not applicable to the Project.

Specifically, Table 3-17 identifies the following relevant guidelines that have been reviewed for consistency:

**TABLE 3-17: GOOD NEIGHBOR POLICY RELEVANT GUIDELINES** 

Measure		Project Consistency	
1.1	An "Air Quality" study shall be prepared in accordance with the Air Quality Management District (AQMD) guidelines which includes both project specific and cumulative impact analysis.	The analysis presented here conforms with applicable analytic guidelines and requirements. The analysis substantiates that all potential air quality impacts, including potential health risk impacts would be lessthan-significant.	
1.2	A "Health Risk Assessment" shall be prepared when a proposed warehouse/distribution facility is located within 1,000 feet of a sensitive receptor, in accordance with AQMD guidelines.	A health risk assessment has been prepared for the proposed Project in accordance with SCAQMD guidelines and is presented under a separate cover.	



	Measure	Project Consistency		
2.1	During construction of the warehouse/distribution facility, all heavy-duty haul trucks accessing the site shall have CARB-Compliant 2010 engines or newer approved CARB engine standards.	All heavy-duty haul trucks accessing the Project site during construction will be in compliance with the CARB Truck and Bus regulation, which requires that heavy duty trucks utilize CARB-Compliant 2010 or newer engines by January 1, 2023.		
2.2	All diesel fueled off-road construction equipment greater than 50 horsepower, including but not limited to excavators, graders, rubber-tired dozers, and similar "off-road" construction equipment shall be equipped with CARB Tier 4 Compliant engines. If the operator lacks Tier 4 equipment, and it is not available for lease or short-term rental within 50 miles of the project site, Tier 3 or cleaner off-road construction equipment may be utilized subject to County approval.	All diesel-fueled off-road construction equipment rated greater than 50 horsepower will meet CARB Tier 4 standards.		
2.3	The maximum daily disturbance area (actively graded area) shall not exceed 10 acres per day.  Non-Grading construction activity in areas greater than 10 acres is allowed.	The maximum daily disturbance area will not exceed 10 acres per day during site preparation and grading. It is anticipated that no more than 5.5 acres would be graded per day.		
2.7	Appropriate dust control measures that meet the SCAQMD standards shall be implemented for grading and construction activity.	The Project would comply with all applicable dust control measures, including SCAQMD Rules 401, 402, and 403.		
2.8	Construction equipment maintenance records and data sheets, which includes equipment design specifications and equipment emission control tier classifications, as well as any other records necessary to verify compliance, shall be kept onsite and furnished to the County upon request.	The Project will maintain records on-site during construction to demonstrate compliance with the above requirements.		
2.9	Construction Contractors shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.	The Project would be required to comply with statewide anti-idling rules. Compliance with anti-idling rules diminishes the potential for localized emissions concentrations and reduces potential adverse effects at sensitive receptors.		
3.1	Warehouse/distribution facilities should be generally designed so that truck bays and loading docks are a minimum of 300 feet, measured from the property line of the sensitive receptor to the nearest dock door using a direct straight-line method. This distance may be reduced if the site design includes berms or other similar features to appropriately shield and buffer the sensitive receptors from the active truck operations areas. Other setbacks appropriate to the site's zoning classification shall be incorporated in the design.	As designed, the proposed Project's loading docks would not be located within 300 feet of any nearby sensitive receptors.		



	Measure	Project Consistency
3.2	Warehouse/distribution facilities shall be designed to provide adequate on-site parking for commercial trucks and passenger vehicles and on-site queuing for trucks that is away from sensitive receptors. The general queuing and spill-over of trucks onto surrounding public streets shall be prevented. Commercial trucks shall not be parked in the public road right-of-way or nearby residential areas.	The site has been designed such that trucks would not need to queue on streets or elsewhere outside the proposed industrial building they serve. The Project design as approved by the County would act to limit on-site queuing, diminishing the potential for localized emissions concentrations and reduces potential adverse effects at sensitive receptors.
3.11	Warehouse/distribution facilities shall install electrical panels and conduit to facilitate future electrical connections, to eliminate idling of main and auxiliary engines during the loading and unloading process. At all cold storage facilities electrical connections shall be provided to each dock.	Loading docks would be wired for electrical hook-ups, allowing future users to seamlessly integrate electric charging for trucks, when such technology becomes readily available.
4.1	Facility operators shall maintain records of their facility owned and operated fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks ("MHDT") and Heavy-Heavy Duty ("HHD") trucks with a gross vehicle weight rating greater than 19,500 pounds accessing the site use year CARB compliant 2010 or newer engines. The records should be maintained on-site and be made available for inspection by the County.	The proposed Project will comply with the CARB Truck and Bus regulation, which requires the use of CARB compliant 2010 or newer engines.
4.2	Facility operators shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.	The Project would be required to comply with statewide anti-idling rules. Compliance with anti-idling rules diminishes the potential for localized emissions concentrations and reduces potential adverse effects at sensitive receptors.
4.4	Facility operators shall coordinate with CARB and SCAQMD to obtain the latest information about regional air quality concentrations, health risks, and trucking regulations.	The operator of the proposed facility will be required to remain in compliance with applicable air quality, health risk, and trucking regulations.
4.5	On-site equipment, such as forklifts, shall be electric with the necessary electrical charging stations provided.	All on-site equipment utilized for the operation of the proposed Project will be electrically powered and charging stations will be provided on-site.
4.6	Facility operators shall establish specific truck routes between the facility and regular destinations, identifying the most direct routes to the nearest highway/freeway and avoid traveling near sensitive receptors.	The operator of the proposed facility will be required to provide this information to drivers accessing the facility.



	Measure	Project Consistency
4.9	A minimum of 5% or as required by the Cal Green Code, whichever is greater of employee parking spaces shall be designated for electric or other alternative fueled vehicles.	As designed, the proposed Project would meet or exceed California Green Building code requirements and provide parking spaces designated for EV charging at a minimum of 5% of the total auto parking stalls.
5.5	Each Facility shall designate a Compliance Officer responsible for implementing the measures described herein and/or in the project conditions of approval and mitigation measures. Contact information should be provided to the County and updated annually, and signs should be posted in visible locations providing the contact information for the Compliance Officer to the surrounding community. These signs shall also identify the website and contact information for the SCAQMD.	A designated Compliance Officer will be appointed for the facility to ensure compliance with these and other applicable requirements and contact information will be provided to the County on an annual basis. Signs will be posted in order to identify the Compliance Officer's contact information, as well as contact information for the SCAQMD.



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#### **5 CERTIFICATIONS**

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed BCI IV Harvill Industrial Center. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com

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Master of Science in Environmental Studies California State University, Fullerton • May 2010

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AEP – Association of Environmental Planners AWMA – Air and Waste Management Association ASTM – American Society for Testing and Materials

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Planned Communities and Urban Infill – Urban Land Institute • June 2011 Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008 Principles of Ambient Air Monitoring – CARB • August 2007 AB2588 Regulatory Standards – Trinity Consultants • November 2006 Air Dispersion Modeling – Lakes Environmental • June 2006



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## APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

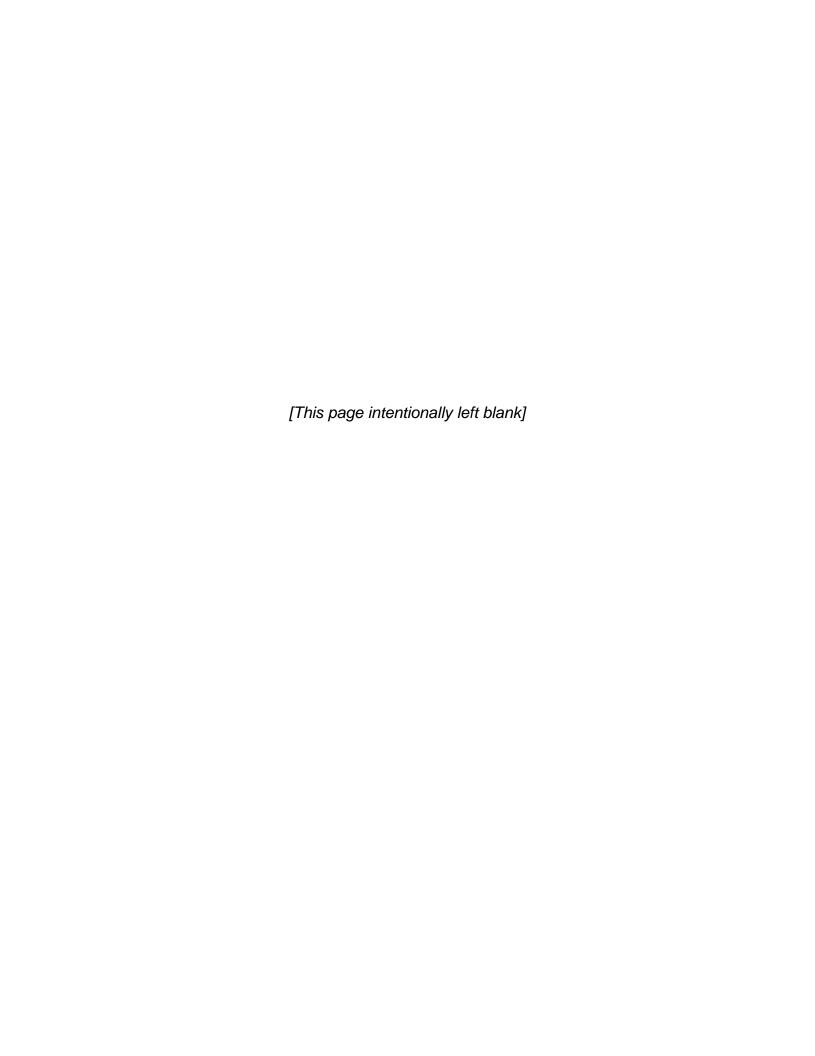


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#### **APPENDIX C**

## MAPS AND TABLES OF AREA DESIGNATIONS FOR STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS



#### **APPENDIX C**

## MAPS AND TABLES OF AREA DESIGNATIONS FOR STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

This attachment fulfills the requirement of Health and Safety Code section 40718 for CARB to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for the national standards.

		Ambient A	Air Quality	Standard:	S	
Dellesteret	Averaging	California S	tandards	Na	tional Standards	<b>3</b> <sup>2</sup>
Pollutant	Time	Concentration <sup>3</sup>	Method <sup>4</sup>	Primary 3.5	Secondary 3.6	Method 7
Ozone (O₃)º	1 Hour	0.09 ppm (180 μg/m³)	Ultraviolet Photometry	I	Same as Primary	Ultraviolet
Ozone (O <sub>3</sub> )	8 Hour	0.070 ppm (137 μg/m²)	Oliraviolet i notorietry	0.070 ppm (137 μg/m³)	Standard	Photometry
Respirable Particulate	24 Hour	50 μg/m³	Gravimetric or Beta	150 μg/m³	Same as Primary	Inertial Separation and Gravimetric
Matter (PM10)	Annual Arithmetic Mean	20 μg/m³	Attenuation	_	Standard	Analysis
Fine Particulate	24 Hour	I	_	35 μg/m³	Same as Primary Standard	Inertial Separation and Gravimetric
Matter (PM2.5) <sup>9</sup>	Annual Arithmetic Mean	12 μg/m³	Gravimetric or Beta Attenuation	12.0 μg/m³	15 μg/m³	Analysis
Carbon	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive	35 ppm (40 mg/m³)	_	Non-Dispersive
Monoxide	8 Hour         9.0 ppm (10 mg/m²)           8 Hour (Lake Tahoe)         6 ppm (7 mg/m²)           n         1 Hour         0.18 ppm (339 μg/m²)           Annual Arithmetic         0.030 ppm (57 μg/m²)	Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	_	Infrared Photometry (NDIR)	
(CO)	,	6 ppm (7 mg/m²)	(NDIIV)	1	_	(NDIN)
Nitrogen			Gas Phase	100 ppb (188 µg/m³)	_	Gas Phase
(NO <sub>2</sub> ) <sup>10</sup>	(NO <sub>2</sub> ) <sup>10</sup> Annual Arithmetic Mean	0.030 ppm (57 μg/m²)	Chemiluminescence	0.053 ppm (100 μg/m²)	Same as Primary Standard	Chemiluminescence
	1 Hour	0.25 ppm (655 μg/m³)		75 ppb (196 μg/m²)	ob (196 μg/m²) —	
Sulfur Dioxide	3 Hour	1	Ultraviolet		0.5 ppm (1300 μg/m³)	Ultraviolet Flourescence; Spectrophotometry
(SO₂)¹¹	24 Hour	0.04 ppm (105 μg/m³)	Fluorescence	0.14 ppm (for certain areas) <sup>11</sup>	_	(Pararosaniline Method)
	Annual Arithmetic Mean	1		0.030 ppm (for certain areas)11	_	Modiody
	30 Day Average	1.5 μg/m³		_	_	
Lead <sup>12,13</sup>	Calendar Quarter	_	Atomic Absorption	1.5 μg/m³ (for certain areas)¹²	Same as Primary	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	1		0.15 μg/m³	Standard	·
Visibility Reducing Particles <sup>4</sup>	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape		No	
Sulfates	24 Hour	25 μg/m²	lon Chromatography		National	
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m²)	Ultraviolet Fluorescence		Standards	
Vinyl Chloride <sup>12</sup>	24 Hour	0.01 ppm (26 μg/m²)	Gas Chromatography			
See footnotes	on next page					

- California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- 2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
- 3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- 4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
- 5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- 6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
- 8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- 9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15  $\mu$ g/m<sup>3</sup> to 12.0  $\mu$ g/m<sup>3</sup>. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35  $\mu$ g/m<sup>3</sup>, as was the annual secondary standard of 15  $\mu$ g/m<sup>3</sup>. The existing 24-hour PM10 standards (primary and secondary) of 150  $\mu$ g/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- 10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- 11. On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
  - Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- 12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- 13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 μg/m<sup>3</sup> as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- 14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

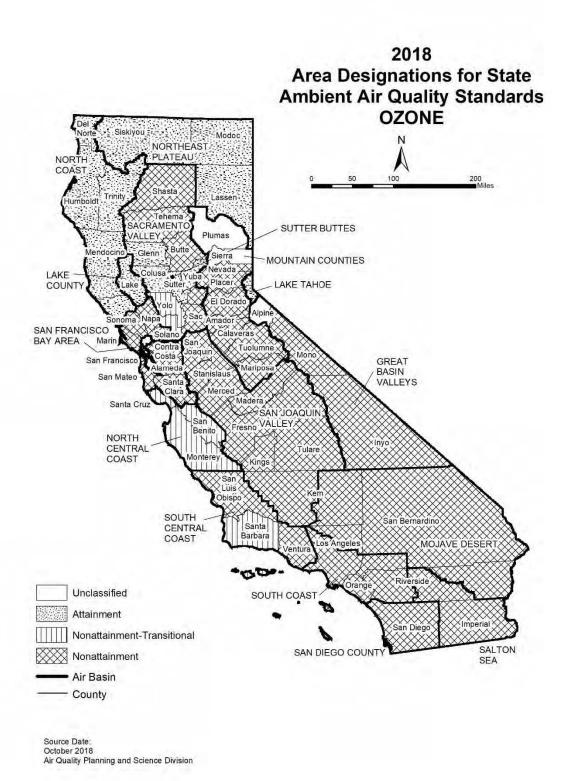
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#### Area Designations for the State Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200. Each area is identified as attainment, nonattainment, nonattainment-transitional, or unclassified for each pollutant, as shown below:

Attainment A
Nonattainment N
Nonattainment-Transitional NA-T
Unclassified U

In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, CARB may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.



**TABLE 1** 

## California Ambient Air Quality Standards Area Designations for Ozone (1)

	N	NA-T	U	Α		N	NA-T	U	Α
GREAT BASIN VALLEYS AIR BASIN					NORTHEAST PLATEAU AIR BASIN				Χ
Alpine County			Х		SACRAMENTO VALLEY AIR BASIN				
Inyo County	Χ				Colusa and Glenn Counties				Χ
Mono County	Х				Sutter/Yuba Counties				
LAKE COUNTY AIR BASIN				Χ	Sutter Buttes	Χ			
LAKE TAHOE AIR BASIN				Χ	Remainder of Sutter County				Χ
MOJAVE DESERT AIR BASIN	Χ				Yuba County				Χ
MOUNTAIN COUNTIES AIR BASIN					Yolo/Solano Counties		Х		
Amador County	Χ				Remainder of Air Basin	Χ			
Calaveras County	Х				SALTON SEA AIR BASIN	Χ			
El Dorado County (portion)	Χ				SAN DIEGO AIR BASIN	Х			
Mariposa County	Х				SAN FRANCISCO BAY AREA AIR BASIN	Χ			
Nevada County	Х				SAN JOAQUIN VALLEY AIR BASIN	Х			
Placer County (portion)	Χ				SOUTH CENTRAL COAST AIR BASIN				
Plumas County			Х		San Luis Obispo County	Χ			
Sierra County			Χ		Santa Barbara County		Х		
Tuolumne County	Х				Ventura County	Х			
NORTH CENTRAL COAST AIR BASIN		Х			SOUTH COAST AIR BASIN	Х			
NORTH COAST AIR BASIN				Х					

<sup>(1)</sup> AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows nonattainment districts to become nonattainment-transitional for ozone by operation of law.

2018
Area Designations for State
Ambient Air Quality Standards
PM10



Source Date: October 2018 Air Quality Planning and Science Division

California Ambient Air Quality Standards
Area Designation for Suspended Particulate Matter (PM10)

	N	U	Α		N	U	Α
GREAT BASIN VALLEYS AIR BASIN	Х			NORTH CENTRAL COAST AIR BASIN	Х		
LAKE COUNTY AIR BASIN			Χ	NORTH COAST AIR BASIN			
LAKE TAHOE AIR BASIN	Х			Del Norte, Sonoma (portion) and Trinity Counties			Х
MOJAVE DESERT AIR BASIN	Х			Remainder of Air Basin	Х		
MOUNTAIN COUNTIES AIR BASIN				NORTHEAST PLATEAU AIR BASIN			
Amador County		Х		Siskiyou County			Х
Calaveras County	Х			Remainder of Air Basin		Х	
El Dorado County (portion)	X			SACRAMENTO VALLEY AIR BASIN			
Mariposa County				Shasta County			Χ
- Yosemite National Park	X			Remainder of Air Basin	Х		
- Remainder of County		Χ		SALTON SEA AIR BASIN	Х		
Nevada County	X			SAN DIEGO AIR BASIN	Χ		
Placer County (portion)	X			SAN FRANCISCO BAY AREA AIR BASIN	Х		
Plumas County	Х			SAN JOAQUIN VALLEY AIR BASIN	Х		
Sierra County	Х			SOUTH CENTRAL COAST AIR BASIN	Х		
Tuolumne County		Х		SOUTH COAST AIR BASIN	Х		



# California Ambient Air Quality Standards Area Designations for Fine Particulate Matter (PM2.5)

	N	U	Α		N	U	Α
GREAT BASIN VALLEYS AIR BASIN			Χ	SALTON SEA AIR BASIN			
LAKE COUNTY AIR BASIN			Χ	Imperial County			
LAKE TAHOE AIR BASIN			Χ	- City of Calexico (3)	Χ		
MOJAVE DESERT AIR BASIN				Remainder of Air Basin			Χ
San Bernardino County				SAN DIEGO AIR BASIN	Χ		
- County portion of federal Southeast			x	SAN FRANCISCO BAY AREA AIR BASIN	Χ		
Desert Modified AQMA for Ozone (1)			^	SAN JOAQUIN VALLEY AIR BASIN	Χ		
Remainder of Air Basin		Х		SOUTH CENTRAL COAST AIR BASIN			
MOUNTAIN COUNTIES AIR BASIN				San Luis Obispo County			Х
Plumas County				Santa Barbara County		Χ	
- Portola Valley (2)	Х			Ventura County			Χ
Remainder of Air Basin		Χ		SOUTH COAST AIR BASIN	Χ		
NORTH CENTRAL COAST AIR BASIN			Χ				
NORTH COAST AIR BASIN			Χ				
NORTHEAST PLATEAU AIR BASIN			Χ				
SACRAMENTO VALLEY AIR BASIN							
Butte County	Х						
Colusa County			Χ				
Glenn County			Χ				
Placer County (portion)			Χ				
Sacramento County			Χ				
Shasta County			Χ				
Sutter and Yuba Counties			Χ				
Remainder of Air Basin		Χ					

<sup>(1)</sup> California Code of Regulations, title 17, section 60200(b)

<sup>(2)</sup> California Code of Regulations, title 17, section 60200(c)

<sup>(3)</sup> California Code of Regulations, title 17, section 60200(a)

2018
Area Designations for State
Ambient Air Quality Standards
CARBON MONOXIDE



California Ambient Air Quality Standards Area Designation for Carbon Monoxide\*

	N	NA-T	U	Α		N	NA-T	U	Α
GREAT BASIN VALLEYS AIR BASIN					SACRAMENTO VALLEY AIR BASIN				
Alpine County			Х		Butte County				Χ
Inyo County				Χ	Colusa County			Х	
Mono County				Χ	Glenn County			Χ	
LAKE COUNTY AIR BASIN				Χ	Placer County (portion)				Χ
LAKE TAHOE AIR BASIN				Χ	Sacramento County				Χ
MOJAVE DESERT AIR BASIN					Shasta County			Χ	
Kern County (portion)			Χ		Solano County (portion)				Χ
Los Angeles County (portion)				Χ	Sutter County				Χ
Riverside County (portion)			Χ		Tehama County			Χ	
San Bernardino County (portion)				Χ	Yolo County				Χ
MOUNTAIN COUNTIES AIR BASIN					Yuba County			Χ	
Amador County			Χ		SALTON SEA AIR BASIN				Χ
Calaveras County			Χ		SAN DIEGO AIR BASIN				Χ
El Dorado County (portion)			Χ		SAN FRANCISCO BAY AREA AIR BASIN				Χ
Mariposa County			Χ		SAN JOAQUIN VALLEY AIR BASIN				
Nevada County			Χ		Fresno County				Χ
Placer County (portion)			Χ		Kern County (portion)				Χ
Plumas County				Χ	Kings County			Х	
Sierra County			Χ		Madera County			Х	
Tuolumne County				Χ	Merced County			Х	
NORTH CENTRAL COAST AIR BASIN		,			San Joaquin County				Χ
Monterey County				Χ	Stanislaus County				Χ
San Benito County			Χ		Tulare County				Χ
Santa Cruz County			Χ		SOUTH CENTRAL COAST AIR BASIN				Χ
NORTH COAST AIR BASIN		,			SOUTH COAST AIR BASIN				Χ
Del Norte County			Χ						
Humboldt County				Χ					
Mendocino County				Χ					
Sonoma County (portion)			Х						
Trinity County			Х						
NORTHEAST PLATEAU AIR BASIN			Χ						

<sup>\*</sup> The area designated for carbon monoxide is a county or portion of a county

2018
Area Designations for State
Ambient Air Quality Standards
NITROGEN DIOXIDE



Source Date: October 2018 Air Quality Planning and Science Division

## California Ambient Air Quality Standards Area Designation for Nitrogen Dioxide

	N	U	Α		N	U	Α
GREAT BASIN VALLEYS AIR BASIN			Χ	SACRAMENTO VALLEY AIR BASIN			Χ
LAKE COUNTY AIR BASIN			Χ	SALTON SEA AIR BASIN			Х
LAKE TAHOE AIR BASIN			Χ	SAN DIEGO AIR BASIN			Χ
MOJAVE DESERT AIR BASIN			Χ	SAN FRANCISCO BAY AREA AIR BASIN			Х
MOUNTAIN COUNTIES AIR BASIN			Χ	SAN JOAQUIN VALLEY AIR BASIN			Х
NORTH CENTRAL COAST AIR BASIN			Χ	SOUTH CENTRAL COAST AIR BASIN			Х
NORTH COAST AIR BASIN			Χ	SOUTH COAST AIR BASIN			
NORTHEAST PLATEAU AIR BASIN			Х	CA 60 Near-road Portion of San Bernardino, Riverside, and Los Angeles Counties	Х		
				Remainder of Air Basin			Х



## California Ambient Air Quality Standards Area Designation for Sulfur Dioxide\*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		Х	SACRAMENTO VALLEY AIR BASIN		Х
LAKE COUNTY AIR BASIN		Х	SALTON SEA AIR BASIN		Х
LAKE TAHOE AIR BASIN		Х	SAN DIEGO AIR BASIN		Х
MOJAVE DESERT AIR BASIN		Х	SAN FRANCISCO BAY AREA AIR BASIN		Х
MOUNTAIN COUNTIES AIR BASIN		Х	SAN JOAQUIN VALLEY AIR BASIN		Х
NORTH CENTRAL COAST AIR BASIN		Х	SOUTH CENTRAL COAST AIR BASIN		Х
NORTH COAST AIR BASIN		Х	SOUTH COAST AIR BASIN		Х
NORTHEAST PLATEAU AIR BASIN		Х			

<sup>\*</sup> The area designated for sulfur dioxide is a county or portion of a county



## California Ambient Air Quality Standards Area Designation for Sulfates

	N	U	Α		N	U	Α
GREAT BASIN VALLEYS AIR BASIN			Χ	SACRAMENTO VALLEY AIR BASIN			Х
LAKE COUNTY AIR BASIN			Χ	SALTON SEA AIR BASIN			Х
LAKE TAHOE AIR BASIN			Χ	SAN DIEGO AIR BASIN			Χ
MOJAVE DESERT AIR BASIN			Χ	SAN FRANCISCO BAY AREA AIR BASIN			Х
MOUNTAIN COUNTIES AIR BASIN			Χ	SAN JOAQUIN VALLEY AIR BASIN			Χ
NORTH CENTRAL COAST AIR BASIN			Χ	SOUTH CENTRAL COAST AIR BASIN			Х
NORTH COAST AIR BASIN			Χ	SOUTH COAST AIR BASIN			Х
NORTHEAST PLATEAU AIR BASIN			Χ				

2018
Area Designations for State
Ambient Air Quality Standards
LEAD



Source Date: October 2018 Air Quality Planning and Science Division

**TABLE 8** 

## California Ambient Air Quality Standards Area Designations for Lead (particulate)\*

	N	U	Α		N	υ	Α
GREAT BASIN VALLEYS AIR BASIN			Χ	SALTON SEA AIR BASIN			Х
LAKE COUNTY AIR BASIN			Χ	SAN DIEGO AIR BASIN			Х
LAKE TAHOE AIR BASIN			Χ	SAN FRANCISCO BAY AREA AIR BASIN			Х
MOJAVE DESERT AIR BASIN			Χ	SAN JOAQUIN VALLEY AIR BASIN			Х
MOUNTAIN COUNTIES AIR BASIN			Χ	SOUTH CENTRAL COAST AIR BASIN			Х
NORTH CENTRAL COAST AIR BASIN			Χ	SOUTH COAST AIR BASIN			Х
NORTH COAST AIR BASIN			Χ				
NORTHEAST PLATEAU AIR BASIN			Х				
SACRAMENTO VALLEY AIR BASIN			Х				

<sup>\*</sup> The area designated for lead is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

2018
Area Designations for State
Ambient Air Quality Standards
HYDROGEN SULFIDE



Source Date: October 2018 Air Quality Planning and Science Division

TABLE 9

## California Ambient Air Quality Standards Area Designation for Hydrogen Sulfide\*

	N	NA-T	U	Α		N	NA-T	U	Α
GREAT BASIN VALLEYS AIR BASIN					NORTH CENTRAL COAST AIR BASIN			Х	
Alpine County			Χ		NORTH COAST AIR BASIN				
Inyo County				Χ	Del Norte County			Х	
Mono County				Χ	Humboldt County				Х
LAKE COUNTY AIR BASIN				Χ	Mendocino County			Χ	
LAKE TAHOE AIR BASIN			Χ		Sonoma County (portion)				
MOJAVE DESERT AIR BASIN					- Geyser Geothermal Area (2)				Χ
Kern County (portion)			Χ		- Remainder of County			Χ	
Los Angeles County (portion)			Χ		Trinity County			Х	
Riverside County (portion)			Χ		NORTHEAST PLATEAU AIR BASIN			Х	
San Bernardino County (portion)					SACRAMENTO VALLEY AIR BASIN			Х	
- Searles Valley Planning Area (1)	Х				SALTON SEA AIR BASIN			Х	
- Remainder of County			Χ		SAN DIEGO AIR BASIN			Х	
MOUNTAIN COUNTIES AIR BASIN					SAN FRANCISCO BAY AREA AIR BASIN			Х	
Amador County					SAN JOAQUIN VALLEY AIR BASIN			Х	
- City of Sutter Creek	Х				SOUTH CENTRAL COAST AIR BASIN				
- Remainder of County			Χ		San Luis Obispo County				Х
Calaveras County			Χ		Santa Barbara County				Х
El Dorado County (portion)			Χ		Ventura County			Х	
Mariposa County			Χ		SOUTH COAST AIR BASIN			Χ	
Nevada County			Χ						
Placer County (portion)			Χ						
Plumas County			Χ						
Sierra County			Χ						
Tuolumne County			Χ						

<sup>\*</sup> The area designated for hydrogen sulfide is a county or portion of a county

<sup>(1) 52</sup> Federal Register 29384 (August 7, 1987)

<sup>(2)</sup> California Code of Regulations, title 17, section 60200(d)

2018
Area Designations for State
Ambient Air Quality Standards
VISIBILITY REDUCING PARTICLES



Source Date: October 2018 Air Quality Planning and Science Division

### TABLE 10

### California Ambient Air Quality Standards Area Designation for Visibility Reducing Particles

	N	NA-T	U	Α		N	NA-T	U	Α
GREAT BASIN VALLEYS AIR BASIN			Χ		SACRAMENTO VALLEY AIR BASIN			Х	
LAKE COUNTY AIR BASIN				Х	SALTON SEA AIR BASIN			Х	
LAKE TAHOE AIR BASIN			Х		SAN DIEGO AIR BASIN			Х	
MOJAVE DESERT AIR BASIN			Х		SAN FRANCISCO BAY AREA AIR BASIN			Х	
MOUNTAIN COUNTIES AIR BASIN			Х		SAN JOAQUIN VALLEY AIR BASIN			Х	
NORTH CENTRAL COAST AIR BASIN			Х		SOUTH CENTRAL COAST AIR BASIN			Х	
NORTH COAST AIR BASIN			Х		SOUTH COAST AIR BASIN			Х	
NORTHEAST PLATEAU AIR BASIN			Х						

#### Area Designations for the National Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a national ambient air quality standard. Additional information about the federal area designations is available on the U.S. EPA website:

https://www.epa.gov/green-book

Over the last several years, U.S. EPA has been reviewing the levels of the various national standards. The agency has already promulgated new standard levels for some pollutants and is considering revising the levels for others. Information about the status of these reviews is available on the U.S. EPA website:

https://www.epa.gov/criteria-air-pollutants

### **Designation Categories**

Suspended Particulate Matter ( $PM_{10}$ ). The U.S. EPA uses three categories to designate areas with respect to  $PM_{10}$ :

- Attainment
- Nonattainment
- Unclassifiable

Ozone, Fine Suspended Particulate Matter ( $PM_{2.5}$ ), Carbon Monoxide (CO), and Nitrogen Dioxide ( $NO_2$ ). The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment
- Unclassifiable/Attainment

The national 1-hour ozone standard was revoked effective June 15, 2005, and the area designations map reflects the 2015 national 8-hour ozone standard of 0.070 ppm. Original designations were finalized on August 3, 2018.

On December 14, 2012, the U.S. EPA established a new national annual primary PM<sub>2.5</sub> standard of 12.0  $\mu$ g/m<sup>3</sup>. New area designations reflecting this revised standard became final in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0  $\mu$ g/m<sup>3</sup> as well as the 24-hour standard of 35  $\mu$ g/m<sup>3</sup>, revised in 2006.

On January 22, 2010, the U.S. EPA established a new national 1-hour NO<sub>2</sub> standard of 100 parts per billion (ppb) and retained the annual average standard of 53 ppb. Designations for the primary NO<sub>2</sub> standard became effective on February 29, 2012. All areas of California meet this standard.

Sulfur Dioxide (SO<sub>2</sub>). The U.S. EPA uses three categories to designate areas with respect to the 24-hour and annual average sulfur dioxide standards. These designation categories are:

- Nonattainment,
- Unclassifiable, and
- Attainment/Unclassifiable.

On June 2, 2010, the U.S. EPA established a new primary 1-hour SO<sub>2</sub> standard of 75 parts per billion (ppb). At the same time, U.S. EPA revoked the 24-hour and annual

average standards. Area designations for the 1-hour SO<sub>2</sub> standard were finalized on December 21, 2017 and are reflected in the area designations map.

Lead (particulate). The U.S. EPA promulgated a new rolling 3-month average lead standard in October 2008 of 0.15  $\mu g/m^3$ . Designations were made for this standard in November 2010.

#### **Designation Areas**

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency, the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at:

https://ecfr.io/Title-40/se40.20.81\_1305



#### TABLE 11

### National Ambient Air Quality Standards Area Designations for 8-Hour Ozone\*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		Х	SACRAMENTO VALLEY AIR BASIN (cont.)		
LAKE COUNTY AIR BASIN		Х	Yolo County (2)	Х	
LAKE TAHOE AIR BASIN		Х	Yuba County		Х
MOUNTAIN COUNTIES AIR BASIN		1	SAN DIEGO COUNTY	Χ	
Amador County	Х		SAN FRANCISCO BAY AREA AIR BASIN	Х	
Calaveras County	Х		SAN JOAQUIN VALLEY AIR BASIN	Χ	
El Dorado County (portion) (2)	Х		SOUTH CENTRAL COAST AIR BASIN (1)		
Mariposa County	Х		San Luis Obispo County		
Nevada County			- Eastern San Luis Obispo County	Х	
- Western Nevada County	Х		- Remainder of County		Х
- Remainder of County		Х	Santa Barbara County		Х
Placer County (portion) (2)	Х		Ventura County		
Plumas County		Х	- Area excluding Anacapa and San Nicolas Islands	Х	
Sierra County		Х	- Channel Islands (1)		Х
Tuolumne County	Х		SOUTH COAST AIR BASIN (1)	Х	
NORTH CENTRAL COAST AIR BASIN		Х	SOUTHEAST DESERT AIR BASIN		
NORTH COAST AIR BASIN		Х	Kern County (portion)	Χ	
NORTHEAST PLATEAU AIR BASIN		Х	- Indian Wells Valley		Х
SACRAMENTO VALLEY AIR BASIN			Imperial County	Χ	
Butte County	Х		Los Angeles County (portion)	Χ	
Colusa County		Х	Riverside County (portion)		
Glenn County		Х	- Coachella Valley	Х	
Sacramento Metro Area (2)	Х		- Non-AQMA portion		Х
Shasta County		Х	San Bernardino County		
Sutter County			- Western portion (AQMA)	Χ	
- Sutter Buttes	Х		- Eastern portion (non-AQMA)		Х
- Southern portion of Sutter County (2)	Х				
- Remainder of Sutter County		Х			
Tehama County					
- Tuscan Buttes	Х				
- Remainder of Tehama County		Х			

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and table reflect the 2015 8-hour ozone standard of 0.070 ppm.

#### (1) South Central Coast Air Basin Channel Islands:

Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.

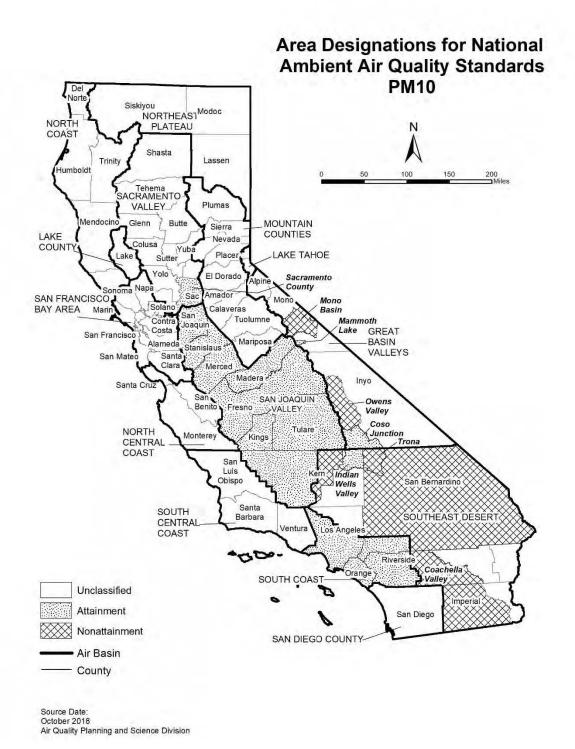
Ventura County includes Anacapa and San Nicolas Islands.

South Coast Air Basin:

Los Angeles County includes San Clemente and Santa Catalina Islands.

(2) For this purpose, the Sacramento Metro Area comprises all of Sacramento and Yolo Counties, the Sacramento Valley Air Basin portion of Solano County, the southern portion of Sutter County, and the Sacramento Valley and Mountain Counties Air Basins portions of Placer and El Dorado counties.

#### FIGURE 12



#### TABLE 12

### **National Ambient Air Quality Standards** Area Designations for Suspended Particulate Matter (PM10)\*

	N	U	Α		N	U	Α
GREAT BASIN VALLEYS AIR BASIN				SAN DIEGO COUNTY		Х	
Alpine County		Х		SAN FRANCISCO BAY AREA AIR BASIN		Х	
Inyo County				SAN JOAQUIN VALLEY AIR BASIN			Х
- Owens Valley Planning Area	Х			SOUTH CENTRAL COAST AIR BASIN		Х	
- Coso Junction			Х	SOUTH COAST AIR BASIN			Х
- Remainder of County		Х		SOUTHEAST DESERT AIR BASIN			
Mono County				Eastern Kern County			
- Mammoth Lake Planning Area			Х	- Indian Wells Valley			Х
- Mono Lake Basin	Х			- Portion within San Joaquin Valley Planning Area	Х		
- Remainder of County		Χ		- Remainder of County		Х	
LAKE COUNTY AIR BASIN		Х		Imperial County			
LAKE TAHOE AIR BASIN		Х		- Imperial Valley Planning Area	Х		
MOUNTAIN COUNTIES AIR BASIN				- Remainder of County		Х	
Placer County (portion) (2)		Х		Los Angeles County (portion)		Х	
Remainder of Air Basin		Х		Riverside County (portion)			
NORTH CENTRAL COAST AIR BASIN		Х		- Coachella Valley (3)	Х		
NORTH COAST AIR BASIN		Х		- Non-AQMA portion		Х	
NORTHEAST PLATEAU AIR BASIN		Х		San Bernardino County			
SACRAMENTO VALLEY AIR BASIN				- Trona	Х		
Butte County		Х		- Remainder of County	Х		
Colusa County		Х					
Glenn County		Х					
Placer County (portion) (2)		Х					
Sacramento County (1)			Х				
Shasta County		Х					
Solano County (portion)		Х					
Sutter County		Х					
Tehama County		Х					
Yolo County		Х					
Yuba County		Х					

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

(1) Air quality in Sacramento County meets the national PM10 standards. The request for redesignation to attainment was approved by U.S. EPA in September 2013.

(2) U.S. EPA designation puts the Sacramento Valley Air Basin portion of Placer County in the Mountain Counties

Air Basin.

<sup>(3)</sup> Air quality in Coachella Valley meets the national PM10 standards. A request for redesignation to attainment has been submitted to U.S. EPA.

#### FIGURE 13

### Area Designations for National Ambient Air Quality Standards PM2.5



#### **TABLE 13**

# National Ambient Air Quality Standards Area Designations for Fine Particulate Matter (PM2.5)\*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		Х	SAN DIEGO COUNTY		Х
LAKE COUNTY AIR BASIN		Х	SAN FRANCISCO BAY AREA AIR BASIN (2)	Х	
LAKE TAHOE AIR BASIN		Х	SAN JOAQUIN VALLEY AIR BASIN	Х	
MOUNTAIN COUNTIES AIR BASIN			SOUTH CENTRAL COAST AIR BASIN		Х
Plumas County			SOUTH COAST AIR BASIN (3)	Х	
- Portola Valley Portion of Plumas	Х		SOUTHEAST DESERT AIR BASIN		
- Remainder of Plumas County		Х	Imperial County (portion) (4)	Х	
Remainder of Air Basin		Х	Remainder of Air Basin		Х
NORTH CENTRAL COAST AIR BASIN		Х			
NORTH COAST AIR BASIN		Х			
NORTHEAST PLATEAU AIR BASIN		Х			
SACRAMENTO VALLEY AIR BASIN					
Sacramento Metro Area (1)	Х				
Sutter County		Х			
Yuba County (portion)		Х			
Remainder of Air Basin		Х			

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305. This map reflects the 2006 24-hour PM2.5 standard as well as the 1997 and 2012 PM2.5 annual standards.

<sup>(1)</sup> For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

<sup>(2)</sup> Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

<sup>(3)</sup> Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

<sup>(4)</sup> That portion of Imperial County encompassing the urban and surrounding areas of Brawley, Calexico, El Centro, Heber, Holtville, Imperial, Seeley, and Westmorland. Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

#### FIGURE 14



**TABLE 14** 

### National Ambient Air Quality Standards Area Designations for Carbon Monoxide\*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		Х	SACRAMENTO VALLEY AIR BASIN		Х
LAKE COUNTY AIR BASIN		Х	SAN DIEGO COUNTY		Х
LAKE TAHOE AIR BASIN		Х	SAN FRANCISCO BAY AREA AIR BASIN		Х
MOUNTAIN COUNTIES AIR BASIN		Х	SAN JOAQUIN VALLEY AIR BASIN		Х
NORTH CENTRAL COAST AIR BASIN		Х	SOUTH CENTRAL COAST AIR BASIN		Х
NORTH COAST AIR BASIN		Χ	SOUTH COAST AIR BASIN		Х
NORTHEAST PLATEAU AIR BASIN		Х	SOUTHEAST DESERT AIR BASIN		Х

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.



**TABLE 15** 

### National Ambient Air Quality Standards Area Designations for Nitrogen Dioxide\*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		Х	SACRAMENTO VALLEY AIR BASIN		Χ
LAKE COUNTY AIR BASIN		Х	SAN DIEGO COUNTY		Χ
LAKE TAHOE AIR BASIN		Х	SAN FRANCISCO BAY AREA AIR BASIN		Х
MOUNTAIN COUNTIES AIR BASIN		Х	SAN JOAQUIN VALLEY AIR BASIN		Х
NORTH CENTRAL COAST AIR BASIN		Х	SOUTH CENTRAL COAST AIR BASIN		Х
NORTH COAST AIR BASIN		Х	SOUTH COAST AIR BASIN		Χ
NORTHEAST PLATEAU AIR BASIN		Х	SOUTHEAST DESERT AIR BASIN		Х

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

#### FIGURE 16



#### **TABLE 16**

### National Ambient Air Quality Standards Area Designations for Sulfur Dioxide\*

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		Х	SOUTH CENTRAL COAST AIR BASIN		
LAKE COUNTY AIR BASIN		Х	San Luis Obispo County		Х
LAKE TAHOE AIR BASIN		Х	Santa Barbara County		Х
MOUNTAIN COUNTIES AIR BASIN		Х	Ventura County		Х
NORTH CENTRAL COAST AIR BASIN		Х	Channel Islands (1)		Х
NORTH COAST AIR BASIN		Х	SOUTH COAST AIR BASIN		Х
NORTHEAST PLATEAU AIR BASIN		Х	SOUTHEAST DESERT AIR BASIN		
SACRAMENTO VALLEY AIR BASIN		Х	Imperial County		Х
SAN DIEGO COUNTY		Х	Remainder of Air Basin		Х
SAN FRANCISCO BAY AREA AIR BASIN		Х			
SAN JOAQUIN VALLEY AIR BASIN					
Fresno County		Х			
Kern County (portion)		Х			
Kings County		Х			
Madera County		Х			
Merced County		Х			
San Joaquin County		Х			
Stanislaus County		Х			
Tulare County		Х			

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and table reflect the 2010 1-hour  $SO_2$  standard of 75 ppb.

Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.

Ventura County includes Anacapa and San Nicolas Islands.

Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

<sup>(1)</sup> South Central Coast Air Basin Channel Islands:

#### FIGURE 17



**TABLE 17** 

## National Ambient Air Quality Standards Area Designations for Lead (particulate)

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		Х	SAN DIEGO COUNTY		Х
LAKE COUNTY AIR BASIN		Χ	SAN FRANCISCO BAY AREA AIR BASIN		Х
LAKE TAHOE AIR BASIN		Х	SAN JOAQUIN VALLEY AIR BASIN		Х
MOUNTAIN COUNTIES AIR BASIN		Χ	SOUTH CENTRAL COAST AIR BASIN		Х
NORTH CENTRAL COAST AIR BASIN		Х	SOUTH COAST AIR BASIN		
NORTH COAST AIR BASIN		Х	Los Angeles County (portion) (1)	Х	
NORTHEAST PLATEAU AIR BASIN		Х	Remainder of Air Basin		Х
SACRAMENTO VALLEY AIR BASIN		Χ	SOUTHEAST DESERT AIR BASIN		Х

<sup>(1)</sup> Portion of County in Air Basin, not including Channel Islands

### **APPENDIX 3.1:**

**CALEEMOD PROJECT CONSTRUCTION EMISSIONS MODEL OUTPUTS** 



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# BCI IV Harvill Industrial Center (Construction - Unmitigated) Custom Report

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# 1. Basic Project Information

# 1.1. Basic Project Information

Data Field	Value
Project Name	BCI IV Harvill Industrial Center (Construction - Unmitigated)
Lead Agency	_
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.84106820160365, -117.25207278942537
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5479
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

# 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	99.8	1000sqft	3.62	99,770	57,883	0.00	_	_
Parking Lot	73.0	Space	0.27	0.00	0.00	0.00	_	Standard Parking
Parking Lot	133	Space	1.68	0.00	0.00	0.00	_	Trailer Parking

Other Asphalt	155	1000sqft	3.55	0.00	0.00	0.00	_	_
Surfaces								

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

				<i>J</i> . <i>J</i>								_						
Un/Mit.	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	5.79	4.96	41.4	44.1	0.07	2.40	0.85	3.25	2.21	0.20	2.42	_	7,836	7,836	0.31	0.14	4.64	7,890
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	12.4	13.0	100	81.5	0.14	5.05	9.47	14.5	4.65	3.89	8.53	_	15,626	15,626	0.62	0.25	0.11	15,716
Average Daily (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	2.97	3.31	22.0	21.8	0.03	1.21	0.86	2.07	1.12	0.28	1.40	_	4,013	4,013	0.16	0.07	0.90	4,038
Annual (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	0.54	0.60	4.01	3.97	0.01	0.22	0.16	0.38	0.20	0.05	0.26	_	664	664	0.03	0.01	0.15	669

# 2.2. Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2023	5.79	4.96	41.4	44.1	0.07	2.40	0.85	3.25	2.21	0.20	2.42	_	7,836	7,836	0.31	0.14	4.64	7,890
Daily - Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2023	12.4	13.0	100	81.5	0.14	5.05	9.47	14.5	4.65	3.89	8.53	_	15,626	15,626	0.62	0.25	0.11	15,716
2024	0.22	13.0	1.21	1.53	< 0.005	0.04	0.10	0.14	0.04	0.02	0.06	_	178	178	0.01	< 0.005	_	179
Average Daily	_	_	_	-	_	_	_	_	-	_	_	_	-	_	-	_	_	_
2023	2.97	3.31	22.0	21.8	0.03	1.21	0.86	2.07	1.12	0.28	1.40	_	4,013	4,013	0.16	0.07	0.90	4,038
2024	0.01	0.79	0.07	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	10.8	10.8	< 0.005	< 0.005	_	10.8
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2023	0.54	0.60	4.01	3.97	0.01	0.22	0.16	0.38	0.20	0.05	0.26	_	664	664	0.03	0.01	0.15	669
2024	< 0.005	0.14	0.01	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	1.79	1.79	< 0.005	< 0.005	_	1.79

# 3. Construction Emissions Details

# 3.1. Site Preparation (2023) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		4.90	47.0	38.0	0.05	2.53	_	2.53	2.33		2.33	_	5,530	5,530	0.22	0.04	_	5,549

Dust From Material Movemen	 :	_	_	_	_	_	5.66	5.66	_	2.69	2.69	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_
Off-Road Equipmen		0.20	1.93	1.56	< 0.005	0.10	_	0.10	0.10	_	0.10	-	227	227	0.01	< 0.005	_	228
Dust From Material Movemen		_	_	_	_	-	0.23	0.23	_	0.11	0.11	_	_	_	-	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.04	0.35	0.28	< 0.005	0.02	_	0.02	0.02	_	0.02	_	37.6	37.6	< 0.005	< 0.005	_	37.8
Dust From Material Movemen	<u> </u>	_	_	_	_	_	0.04	0.04	_	0.02	0.02	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	-	_	_	-	_	_	-
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.10	0.09	0.11	1.24	0.00	0.00	0.01	0.01	0.00	0.00	0.00	_	243	243	0.01	0.01	0.03	246
Vendor	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	62.9	62.9	< 0.005	0.01	< 0.005	65.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	_	10.1	10.1	< 0.005	< 0.005	0.02	10.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	2.58	2.58	< 0.005	< 0.005	< 0.005	2.70
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	_	1.67	1.67	< 0.005	< 0.005	< 0.005	1.70
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	0.43	0.43	< 0.005	< 0.005	< 0.005	0.45
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 3.3. Grading (2023) - Unmitigated

_ocation	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		5.30	52.0	40.5	0.08	2.51	_	2.51	2.30	_	2.30	_	8,817	8,817	0.36	0.07	_	8,848
Dust From Material Movemen	<u> </u>	_	_	_	_	_	3.08	3.08	_	1.02	1.02	_	_	_	_	-	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.42	4.13	3.22	0.01	0.20	_	0.20	0.18	_	0.18	_	701	701	0.03	0.01	_	703

Dust From Material Movemen	 :	_	_	_	_	_	0.24	0.24	_	0.08	0.08	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.08	0.75	0.59	< 0.005	0.04	_	0.04	0.03	_	0.03	_	116	116	< 0.005	< 0.005	_	116
Dust From Material Movemen		_	_	_	_	_	0.04	0.04	_	0.01	0.01	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	-	_	-	_	_	_	-
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.13	0.12	0.14	1.58	0.00	0.00	0.02	0.02	0.00	0.00	0.00	_	310	310	0.01	0.01	0.04	314
Vendor	< 0.005	< 0.005	0.12	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	94.3	94.3	< 0.005	0.01	0.01	98.5
Hauling	0.02	0.01	0.68	0.16	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	_	568	568	0.01	0.09	0.03	596
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	
Worker	0.01	0.01	0.01	0.13	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	_	25.0	25.0	< 0.005	< 0.005	0.05	25.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	7.49	7.49	< 0.005	< 0.005	0.01	7.83
Hauling	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	45.1	45.1	< 0.005	0.01	0.04	47.3
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	_	4.14	4.14	< 0.005	< 0.005	0.01	4.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	1.24	1.24	< 0.005	< 0.005	< 0.005	1.30

ш	auling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		7 //7	7.47	< 0.005	< 0.005	0.01	7.84
	auiiiig	< 0.003	< 0.003	0.01	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	_	1.41	7.47	< 0.003	< 0.003	0.01	7.84

# 3.5. Building Construction (2023) - Unmitigated

Location	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		3.69	32.6	28.8	0.05	1.99	_	1.99	1.83	_	1.83	_	5,110	5,110	0.21	0.04	_	5,128
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_
Off-Road Equipmen		1.31	11.6	10.2	0.02	0.71	_	0.71	0.65	_	0.65	_	1,820	1,820	0.07	0.01	_	1,826
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.24	2.12	1.87	< 0.005	0.13	_	0.13	0.12	-	0.12	_	301	301	0.01	< 0.005	_	302
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.25	0.22	0.22	3.81	0.00	0.00	0.03	0.03	0.00	0.00	0.00	_	617	617	0.03	0.02	2.65	627

Vendor	0.02	0.01	0.44	0.14	< 0.005	0.01	0.02	0.03	0.01	0.01	0.01	_	377	377	0.01	0.06	1.05	395
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.08	0.08	0.09	1.08	0.00	0.00	0.01	0.01	0.00	0.00	0.00	_	205	205	0.01	0.01	0.41	207
Vendor	0.01	< 0.005	0.17	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	134	134	< 0.005	0.02	0.16	140
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.02	0.01	0.02	0.20	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	_	33.9	33.9	< 0.005	< 0.005	0.07	34.3
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	22.2	22.2	< 0.005	< 0.005	0.03	23.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 3.7. Paving (2023) - Unmitigated

Location	TOG	ROG	NOx	со		PM10E		PM10T	PM2.5E		PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.88	8.06	10.0	0.01	0.41	_	0.41	0.38	_	0.38	_	1,512	1,512	0.06	0.01	_	1,517
Paving	_	0.08	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Off-Road Equipmen		0.88	8.06	10.0	0.01	0.41	_	0.41	0.38	_	0.38	_	1,512	1,512	0.06	0.01	_	1,517
Paving	_	0.08	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_
Off-Road Equipmen		0.42	3.84	4.78	0.01	0.20	_	0.20	0.18	_	0.18	_	721	721	0.03	0.01	_	723
Paving	_	0.04	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.08	0.70	0.87	< 0.005	0.04	_	0.04	0.03	_	0.03	-	119	119	< 0.005	< 0.005	_	120
Paving	_	0.01	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.01	0.01	0.00	0.00	0.00	_	220	220	0.01	0.01	0.94	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	<u> </u>	_	_	_	<del>-</del>	_	_	_	_	_	_	_	_	_	_	_
Worker	0.08	0.08	0.09	1.03	0.00	0.00	0.01	0.01	0.00	0.00	0.00	_	202	202	0.01	0.01	0.02	205
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.04	0.04	0.04	0.52	0.00	0.00	0.01	0.01	0.00	0.00	0.00	_	97.8	97.8	< 0.005	< 0.005	0.19	99.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.01	0.01	0.01	0.09	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	_	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 3.9. Architectural Coating (2023) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.20	1.25	1.54	< 0.005	0.05	_	0.05	0.05	_	0.05	_	178	178	0.01	< 0.005	_	179
Architect ural Coatings	_	12.8	_		_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.01	0.08	0.09	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	10.8	10.8	< 0.005	< 0.005	_	10.8

Architect Coatings	_	0.78	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmer		< 0.005	0.01	0.02	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	-	1.79	1.79	< 0.005	< 0.005	_	1.79
Architect ural Coatings	_	0.14	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	-
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.04	0.04	0.05	0.55	0.00	0.00	0.01	0.01	0.00	0.00	0.00	_	108	108	0.01	< 0.005	0.01	109
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	-
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	_	6.63	6.63	< 0.005	< 0.005	0.01	6.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	_	1.10	1.10	< 0.005	< 0.005	< 0.005	1.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 3.11. Architectural Coating (2024) - Unmitigated

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T		PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.18	1.21	1.53	< 0.005	0.04	_	0.04	0.04	_	0.04	_	178	178	0.01	< 0.005	_	179
Architect ural Coatings	_	12.8	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.01	0.07	0.09	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	10.8	10.8	< 0.005	< 0.005	_	10.8
Architect ural Coatings	_	0.78	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		< 0.005	0.01	0.02	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	1.79	1.79	< 0.005	< 0.005	_	1.79
Architect ural Coatings	_	0.14	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Average Daily	_	_	_	_	_	_		_	_	_	_	_	_			_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetatio n	TOG	ROG				PM10E				PM2.5D		BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_		_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Land	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Use																		

Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_		_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	<u> </u>	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Species	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T			PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Sequest	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_		_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	<u> </u>	<u> </u>	<u> </u>	_	_	<u> </u>
Remove d	_	_	_	_	_		_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	2/1/2023	2/21/2023	5.00	15.0	_
Grading	Grading	2/21/2023	3/31/2023	5.00	29.0	_
Building Construction	Building Construction	4/1/2023	9/30/2023	5.00	130	_
Paving	Paving	4/1/2023	11/30/2023	5.00	174	_
Architectural Coating	Architectural Coating	12/1/2023	1/31/2024	5.00	44.0	_

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
<b>Building Construction</b>	Forklifts	Diesel	Average	5.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	87.0	0.43
Grading	Crawler Tractors	Diesel	Average	3.00	8.00	87.0	0.43
Building Construction	Crawler Tractors	Diesel	Average	5.00	8.00	87.0	0.43
Grading	Scrapers	Diesel	Average	3.00	8.00	423	0.48

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	_	_	_	_
Site Preparation	Worker	18.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT

Site Preparation	Onsite truck	0.00	0.00	HHDT
Grading	_	_	_	_
Grading	Worker	23.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	3.00	10.2	HHDT,MHDT
Grading	Hauling	8.00	20.0	HHDT
Grading	Onsite truck	0.00	0.00	HHDT
Building Construction	_	_	_	_
Building Construction	Worker	42.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	12.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	0.00	HHDT
Paving	_	_	_	_
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	0.00	HHDT
Architectural Coating	_	_	_	_
Architectural Coating	Worker	8.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	ннот
Architectural Coating	Onsite truck	0.00	0.00	ННОТ

### 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	160,443	53,481	14,383

### 5.6. Dust Mitigation

#### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	52.5	0.00	_
Grading	1,755	0.00	160	0.00	_
Paving	0.00	0.00	0.00	0.00	5.50

#### 5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

### 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%
Parking Lot	0.27	100%
Parking Lot	1.68	100%
Other Asphalt Surfaces	3.55	100%

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
1001	Title por Tool	· · ·	S	

20	023	0.00	532	0.03	< 0.005
20	024	0.00	532	0.03	< 0.005

## 5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
vegetation Land Ose Type	regetation soil type	Illitial Acies	Filial Acies

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
Biomaco Cover typo	miliar / toros	T mar / toros

### 5.18.2. Sequestration

### 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
nee type		Listing Caroa (ittilly car)	Tatara Sas Sarsa (Star)

# 8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 9.13 acres
Construction: Construction Phases	Construction anticipated to begin February 1, 2023 and end January 31, 2024
Construction: Off-Road Equipment	Equipment based on equipment used for construction of similar projects
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction

Construction: Architectural Coatings

Rule 1113

#### **APPENDIX 3.2:**

**CALEEMOD PROJECT REGIONAL OPERATIONAL EMISSIONS MODEL OUTPUTS** 



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# BCI IV Harvill Industrial Center (Operations) Custom Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	BCI IV Harvill Industrial Center (Operations)
Lead Agency	_
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.84106820160365, -117.25207278942537
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5479
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

# 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	99.8	1000sqft	3.62	99,770	57,883	0.00	_	Passenger Cars
Parking Lot	73.0	Space	0.27	0.00	0.00	0.00	_	Standard Parking
Parking Lot	133	Space	1.68	0.00	0.00	0.00	_	Trailer Parking

Other Asphalt Surfaces	155	1000sqft	3.55	0.00	0.00	0.00	_	_
User Defined Industrial	99.8	User Defined Unit	0.00	0.00	0.00	0.00	_	Trucks
User Defined Parking	133	User Defined Unit	0.00	0.00	0.00	0.00	_	_

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	3.48	5.47	8.77	36.5	0.12	0.21	3.10	3.31	0.21	0.58	0.78	111	14,529	14,640	11.7	1.10	130	15,391
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	2.61	4.66	9.17	26.5	0.12	0.20	3.10	3.30	0.20	0.58	0.78	111	14,025	14,136	11.7	1.11	88.6	14,849
Average Daily (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	2.46	4.56	7.12	23.4	0.09	0.18	2.27	2.44	0.17	0.42	0.60	111	11,021	11,132	11.7	0.85	101	11,777
Annual (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	0.45	0.83	1.30	4.26	0.02	0.03	0.41	0.45	0.03	0.08	0.11	18.4	1,825	1,843	1.93	0.14	16.7	1,950

# 2.5. Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	
Mobile	2.59	2.25	7.59	31.2	0.11	0.12	3.10	3.22	0.11	0.58	0.69	_	11,899	11,899	0.29	0.97	42.5	12,239
Area	0.77	3.16	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Energy	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	2,458	2,458	0.22	0.02	_	2,468
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	3.48	5.47	8.77	36.5	0.12	0.21	3.10	3.31	0.21	0.58	0.78	111	14,529	14,640	11.7	1.10	130	15,391
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	
Mobile	2.48	2.15	8.02	25.6	0.11	0.12	3.10	3.22	0.11	0.58	0.69	_	11,413	11,413	0.30	0.99	1.10	11,716
Area	_	2.44	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Energy	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	2,458	2,458	0.22	0.02	_	2,468
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	2.61	4.66	9.17	26.5	0.12	0.20	3.10	3.30	0.20	0.58	0.78	111	14,025	14,136	11.7	1.11	88.6	14,849
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	1.81	1.56	5.94	19.4	0.08	0.09	2.27	2.35	0.08	0.42	0.50	_	8,396	8,396	0.22	0.72	13.4	8,631
Area	0.53	2.93	0.03	2.97	< 0.005	< 0.005	_	< 0.005	0.01	_	0.01	_	12.2	12.2	< 0.005	< 0.005	_	12.3
Energy	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	2,458	2,458	0.22	0.02	_	2,468
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233

Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	2.46	4.56	7.12	23.4	0.09	0.18	2.27	2.44	0.17	0.42	0.60	111	11,021	11,132	11.7	0.85	101	11,777
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	0.33	0.29	1.08	3.54	0.01	0.02	0.41	0.43	0.01	0.08	0.09	_	1,390	1,390	0.04	0.12	2.22	1,429
Area	0.10	0.53	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03
Energy	0.02	0.01	0.21	0.18	< 0.005	0.02	_	0.02	0.02	_	0.02	_	407	407	0.04	< 0.005	_	409
Water	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2
Waste	_	_	_	_	_	_	_	_	_	_	_	11.0	0.00	11.0	1.10	0.00	_	38.6
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	14.5	14.5
Total	0.45	0.83	1.30	4.26	0.02	0.03	0.41	0.45	0.03	0.08	0.11	18.4	1,825	1,843	1.93	0.14	16.7	1,950

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	2.19	1.98	1.38	27.8	0.06	0.03	0.27	0.30	0.02	0.08	0.10	_	5,961	5,961	0.19	0.14	23.7	6,031
Parking Lot	0.11	0.10	0.07	1.45	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	310	310	0.01	0.01	1.23	313
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

User Defined Industrial	0.07	0.04	1.70	0.50	0.01	0.03	0.11	0.13	0.02	0.04	0.06	_	1,549	1,549	0.03	0.23	4.46	1,623
User Defined Parking	0.21	0.13	4.43	1.45	0.04	0.06	0.29	0.35	0.06	0.09	0.15	_	4,079	4,079	0.07	0.60	13.1	4,272
Total	2.59	2.25	7.59	31.2	0.11	0.12	0.68	0.80	0.11	0.21	0.32	_	11,899	11,899	0.29	0.97	42.5	12,239
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	2.10	1.89	1.54	22.4	0.05	0.03	0.27	0.30	0.02	0.08	0.10	_	5,497	5,497	0.20	0.15	0.61	5,547
Parking Lot	0.11	0.10	0.08	1.17	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	286	286	0.01	0.01	0.03	288
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.07	0.04	1.77	0.51	0.01	0.03	0.11	0.13	0.02	0.04	0.06	_	1,549	1,549	0.03	0.23	0.12	1,620
User Defined Parking	0.20	0.12	4.63	1.46	0.04	0.06	0.29	0.35	0.06	0.09	0.15	_	4,081	4,081	0.06	0.60	0.34	4,261
Total	2.48	2.15	8.02	25.6	0.11	0.12	0.68	0.80	0.11	0.21	0.32	_	11,413	11,413	0.30	0.99	1.10	11,716
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	0.28	0.25	0.21	3.12	0.01	< 0.005	0.04	0.04	< 0.005	0.01	0.01	_	674	674	0.02	0.02	1.24	681
Parking Lot	0.01	0.01	0.01	0.16	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	-	35.0	35.0	< 0.005	< 0.005	0.06	35.4
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

User Defined Industrial	0.01	0.01	0.24	0.07	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	188	188	< 0.005	0.03	0.23	196
User Defined Parking	0.03	0.02	0.62	0.19	0.01	0.01	0.04	0.05	0.01	0.01	0.02	_	494	494	0.01	0.07	0.68	516
Total	0.33	0.29	1.08	3.54	0.01	0.02	0.09	0.11	0.01	0.03	0.04	_	1,390	1,390	0.04	0.12	2.22	1,429

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

		to (ib/ aa	,	iy, toinyi														
Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	912	912	0.09	0.01	_	917
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	172	172	0.02	< 0.005	_	173
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	1,084	1,084	0.10	0.01	_	1,091

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	912	912	0.09	0.01	_	917
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	172	172	0.02	< 0.005	_	173
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	1,084	1,084	0.10	0.01	_	1,091
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	151	151	0.01	< 0.005	-	152
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	28.5	28.5	< 0.005	< 0.005	_	28.7
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	180	180	0.02	< 0.005	_	181

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	1,373	1,373	0.12	< 0.005	_	1,377
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	-	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	1,373	1,373	0.12	< 0.005	_	1,377
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	1,373	1,373	0.12	< 0.005	_	1,377
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	-	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	1,373	1,373	0.12	< 0.005	_	1,377
Annual	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	-
General Heavy Industry	0.02	0.01	0.21	0.18	< 0.005	0.02	_	0.02	0.02	_	0.02	_	227	227	0.02	< 0.005	_	228
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	-	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	-	0.00	0.00	0.00	0.00	_	0.00
Total	0.02	0.01	0.21	0.18	< 0.005	0.02	_	0.02	0.02	_	0.02	_	227	227	0.02	< 0.005	_	228

## 4.3. Area Emissions by Source

### 4.3.2. Unmitigated

		<u> </u>						_										
Source	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily,	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Summer																		
(Max)																		

Consum er	_	2.15	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	0.29	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt	0.77	0.71	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Total	0.77	3.16	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	25.9	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	2.15	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	28.0	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	0.34	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	0.39	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt	0.10	0.09	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03
Total	0.10	0.82	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03
		_	-		-													

# 4.4. Water Emissions by Land Use

### 4.4.2. Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00

User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2

## 4.5. Waste Emissions by Land Use

### 4.5.2. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Parking Lot	_	_	_	_	_	_	_	_	_		_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	11.0	0.00	11.0	1.10	0.00	_	38.6
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	11.0	0.00	11.0	1.10	0.00	_	38.6

# 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

Land Use	TOG	ROG								PM2.5D		BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	_	_	_	_	_	<u> </u>	_	_	_	_	_	<u> </u>	_	_	_	_	87.5	87.5
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	14.5	14.5
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	14.5	14.5

# 4.7. Offroad Emissions By Equipment Type

#### 4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	<u> </u>	<u> </u>	_	_	_	_	_	_	<u> </u>	_	_	_	<u> </u>	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

## 4.8. Stationary Emissions By Equipment Type

#### 4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

		( ( ) ( ) ( )	,	<i>J</i> , <i>J</i> -		, , , , , , , , , , , , , , , , , , , ,	(-	· · · · · · · · · · · · · · · · · · ·	,	· · · <b>,</b> · · · · ·	,							
Equipme nt Type	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.9. User Defined Emissions By Equipment Type

#### 4.9.1. Unmitigated

Equipme nt Type	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

O I I I C I I C		. (	,	J, J-					<b>J</b> ,		, ,							
Vegetatio n	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	<u> </u>	_	_	_	_	_	_	<u> </u>	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_		_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Species	TOG	ROG	NOx	CO	SO2			b/day for PM10T				BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Sequest	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 5. Activity Data

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Heavy Industry	457	38.7	15.5	122,072	7,993	676	270	2,133,295
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	23.8	2.01	0.80	6,343	415	35.2	14.0	110,852
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	25.7	2.17	0.87	6,869	530	44.8	17.9	141,481
User Defined Parking	81.2	6.87	2.75	21,665	1,499	127	50.8	400,006

# 5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	160,443	53,481	14,383

#### 5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Heavy Industry	954,706	349	0.0330	0.0040	4,285,154
Parking Lot	63,948	349	0.0330	0.0040	0.00
Parking Lot	116,508	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00
User Defined Parking	0.00	349	0.0330	0.0040	0.00

## 5.12. Operational Water and Wastewater Consumption

#### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Heavy Industry	23,071,813	917,776
Parking Lot	0.00	0.00

Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	124	0.00
Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	0.00

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Heavy Industry	Other commercial A/C and heat pumps	User Defined	150	7.50	7.50	7.50	18.0

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
10.10 (0.00 21)	1 1 21 1					

### 5.16. Stationary Sources

#### 5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

#### 5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
Equipment Type	Truel Type	Number	Doller Rating (MINDIG/III)	Daily Heat Input (MiMbtu/day)	Armuai rieat input (iviivibtu/yr)

#### 5.17. User Defined

Equipment Type	Fuel Type
_	_

### 5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

N/ / C	N/ ( C O 11 T	1. 202. 1. A	
Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
vogotation Earla 500 Typo	rogotation con 1300	miliar 7 tor 00	T II Idi 7 toroo

#### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

Biomass Cover Type Initial Acres Final Acres

#### 5.18.2. Sequestration

### 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
11.0	1 11		

# 8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 9.13 acres
Construction: Construction Phases	Construction anticipated to begin February 1, 2023 and end January 31, 2024
Construction: Off-Road Equipment	Equipment based on equipment used for construction of similar projects
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis
Operations: Fleet Mix	Fleet mix revised based on information provided in the Traffic analysis
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater.

# BCI IV Harvill Industrial Center (Operations) Detailed Report

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# 1. Basic Project Information

# 1.1. Basic Project Information

Data Field	Value
Project Name	BCI IV Harvill Industrial Center (Operations)
Lead Agency	_
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.84106820160365, -117.25207278942537
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5479
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

# 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	99.8	1000sqft	3.62	99,770	57,883	_	_	Passenger Cars
Parking Lot	73.0	Space	0.27	0.00	0.00	0.00	_	Standard Parking
Parking Lot	133	Space	1.68	0.00	0.00	0.00	_	Trailer Parking

Other Asphalt Surfaces	155	1000sqft	3.55	0.00	0.00	0.00	_	_
User Defined Industrial	99.8	User Defined Unit	0.00	0.00	0.00	0.00	_	Trucks
User Defined Parking	133	User Defined Unit	0.00	0.00	0.00	0.00	_	_

#### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	1.86	3.98	9.48	15.7	0.09	0.18	1.82	2.00	0.17	0.38	0.56	94.8	10,839	10,934	9.89	1.31	32.7	11,604
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	1.05	3.24	9.87	9.76	0.09	0.17	1.82	1.99	0.17	0.38	0.55	94.8	10,687	10,781	9.89	1.31	2.66	11,423
Average Daily (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	1.31	3.51	7.45	10.4	0.07	0.14	1.33	1.47	0.14	0.28	0.42	94.8	8,185	8,279	9.84	0.99	11.6	8,833
Annual (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	0.24	0.64	1.36	1.90	0.01	0.03	0.24	0.27	0.03	0.05	0.08	15.7	1,355	1,371	1.63	0.16	1.92	1,462

# 2.5. Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	
Mobile	1.03	0.82	8.93	10.9	0.09	0.13	1.82	1.95	0.13	0.38	0.51	_	9,546	9,546	0.19	1.19	30.8	9,937
Area	0.77	3.14	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Energy	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	1,120	1,120	0.10	0.01	_	1,125
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	1.86	3.98	9.48	15.7	0.09	0.18	1.82	2.00	0.17	0.38	0.56	94.8	10,839	10,934	9.89	1.31	32.7	11,604
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	1.00	0.78	9.35	9.33	0.09	0.13	1.82	1.95	0.13	0.38	0.51	_	9,412	9,412	0.19	1.20	0.80	9,774
Area	_	2.43	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Energy	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	1,120	1,120	0.10	0.01	_	1,125
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	1.05	3.24	9.87	9.76	0.09	0.17	1.82	1.99	0.17	0.38	0.55	94.8	10,687	10,781	9.89	1.31	2.66	11,423
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	0.73	0.57	6.91	7.02	0.07	0.10	1.33	1.43	0.09	0.28	0.37	_	6,898	6,898	0.14	0.88	9.73	7,172
Area	0.53	2.91	0.03	2.97	< 0.005	< 0.005	_	< 0.005	0.01	_	0.01	_	12.2	12.2	< 0.005	< 0.005	_	12.3
Energy	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	1,120	1,120	0.10	0.01	_	1,125
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177

Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	1.31	3.51	7.45	10.4	0.07	0.14	1.33	1.47	0.14	0.28	0.42	94.8	8,185	8,279	9.84	0.99	11.6	8,833
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	0.13	0.10	1.26	1.28	0.01	0.02	0.24	0.26	0.02	0.05	0.07	_	1,142	1,142	0.02	0.15	1.61	1,187
Area	0.10	0.53	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	_	0.01	0.01	_	0.01	_	185	185	0.02	< 0.005	_	186
Water	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2
Waste	_	_	_	_	_	_	_	_	_	_	_	8.37	0.00	8.37	0.84	0.00	_	29.3
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.31	0.31
Total	0.24	0.64	1.36	1.90	0.01	0.03	0.24	0.27	0.03	0.05	0.08	15.7	1,355	1,371	1.63	0.16	1.92	1,462

# 4. Operations Emissions Details

# 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.54	0.48	0.34	6.79	0.01	0.01	0.07	0.07	0.01	0.02	0.03	_	1,454	1,454	0.05	0.03	5.78	1,471
Parking Lot	0.11	0.10	0.07	1.46	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	312	312	0.01	0.01	1.24	315

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.17	0.10	4.04	1.20	0.03	0.06	0.26	0.32	0.06	0.08	0.14	-	3,653	3,653	0.06	0.55	10.5	3,828
User Defined Parking	0.21	0.13	4.49	1.46	0.04	0.06	0.29	0.35	0.06	0.09	0.16	-	4,128	4,128	0.07	0.60	13.2	4,323
Total	1.03	0.82	8.93	10.9	0.09	0.13	0.63	0.76	0.13	0.20	0.33	_	9,546	9,546	0.19	1.19	30.8	9,937
Daily, Winter (Max)	_	_	_	_	_	_	-	_	_	_	_	-	_	-	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.51	0.46	0.38	5.47	0.01	0.01	0.07	0.07	0.01	0.02	0.03	_	1,341	1,341	0.05	0.04	0.15	1,353
Parking Lot	0.11	0.10	0.08	1.17	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	287	287	0.01	0.01	0.03	290
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.17	0.10	4.22	1.21	0.03	0.06	0.26	0.32	0.06	0.08	0.14	-	3,654	3,654	0.06	0.55	0.27	3,820
User Defined Parking	0.20	0.13	4.68	1.47	0.04	0.06	0.29	0.35	0.06	0.09	0.16	-	4,129	4,129	0.07	0.61	0.34	4,312
Total	1.00	0.78	9.35	9.33	0.09	0.13	0.63	0.76	0.13	0.20	0.33	_	9,412	9,412	0.19	1.20	0.80	9,774
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.07	0.06	0.05	0.76	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	164	164	0.01	< 0.005	0.30	166

Parking Lot	0.01	0.01	0.01	0.16	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	35.2	35.2	< 0.005	< 0.005	0.06	35.6
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.02	0.01	0.57	0.16	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	_	443	443	0.01	0.07	0.55	463
User Defined Parking	0.03	0.02	0.63	0.20	0.01	0.01	0.04	0.05	0.01	0.01	0.02	_	500	500	0.01	0.07	0.69	523
Total	0.13	0.10	1.26	1.28	0.01	0.02	0.08	0.10	0.02	0.03	0.04	_	1,142	1,142	0.02	0.15	1.61	1,187

# 4.2. Energy

#### 4.2.1. Electricity Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	439	439	0.04	0.01	_	441
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	71.1	71.1	0.01	< 0.005	_	71.5
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_		_	_	_	0.00	0.00	0.00	0.00	_	0.00

User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	510	510	0.05	0.01	_	513
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	439	439	0.04	0.01	_	441
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	71.1	71.1	0.01	< 0.005	_	71.5
Other Asphalt Surfaces	_	_	_	-	_	_	_	_	_	-	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	-	-	-	_	_	_	_	-	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	510	510	0.05	0.01	_	513
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	72.6	72.6	0.01	< 0.005	_	73.0
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	11.8	11.8	< 0.005	< 0.005	_	11.8
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_		_	_	0.00	0.00	0.00	0.00	_	0.00

User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	84.4	84.4	0.01	< 0.005	_	84.9

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	co	SO2	PM10E	<u> </u>			PM2.5D		BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	-	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	610	610	0.05	< 0.005	_	612
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	610	610	0.05	< 0.005	_	612
Daily, Winter (Max)	_	_	_	_				_		_	_		_	_	_	_	_	_

Unrefrige Warehous Rail		0.03	0.51	0.43	< 0.005	0.04	-	0.04	0.04	_	0.04	_	610	610	0.05	< 0.005	_	612
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	610	610	0.05	< 0.005	_	612
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.01	0.01	0.09	0.08	< 0.005	0.01	_	0.01	0.01	_	0.01	_	101	101	0.01	< 0.005	_	101
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	-	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.01	0.01	0.09	0.08	< 0.005	0.01	_	0.01	0.01	_	0.01	_	101	101	0.01	< 0.005	_	101

# 4.3. Area Emissions by Source

#### 4.3.2. Unmitigated

Chlena	Pollulan	is (ib/da	y for dall	y, ton/yr	for annu	ial) and	GHGS (I	b/day ioi	daliy, iv	11/yr for	annuai)							
Source	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	2.15	_	_		_		_	_	_	_	_	_	_		_	_	_
Architect ural Coatings	_	0.27	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt	0.77	0.71	0.04	4.34	< 0.005	0.01	_	0.01	0.01		0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Total	0.77	3.14	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	2.15	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	0.27	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	2.43	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	0.39	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Architect ural	_	0.05	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt	0.10	0.09	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03
Total	0.10	0.53	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03

# 4.4. Water Emissions by Land Use

### 4.4.2. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00

User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2

# 4.5. Waste Emissions by Land Use

### 4.5.2. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_			_	_	_		50.5	0.00	50.5	5.05	0.00		177
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Unrefrige Warehous Rail	— e-No	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Parking Lot	_	_	_	_	-	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	-	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_		_	_	_	_	_	8.37	0.00	8.37	0.84	0.00	_	29.3
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	-	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	-	-	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	-		_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	8.37	0.00	8.37	0.84	0.00	_	29.3

### 4.6. Refrigerant Emissions by Land Use

#### 4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Ontona	· Onatan	10 (10/ 44	y ioi aaii	iy, toi <i>i,</i> y i	ioi aiiiic	ani, ana	01.00 (.	Drudy 101	adily, iv	, y	aililiaaij							
Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.31	0.31
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.31	0.31

# 4.7. Offroad Emissions By Equipment Type

#### 4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.8. Stationary Emissions By Equipment Type

#### 4.8.1. Unmitigated

Equipme nt Type	TOG	ROG		со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Annual	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.9. User Defined Emissions By Equipment Type

#### 4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type		ROG		со	SO2	PM10E			PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Circona	- Official I	to (nor dia)	y ror dan	y, to.,, y.	TOT GITTIO	idi) diridi	C1 100 (II	or day 101	Gany, II	117 91 101	ai ii iaai j							
Vegetatio n	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

#### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG		СО	SO2	PM10E			PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_		_	_	_	_	_	<u> </u>	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	<u> </u>	_	<u> </u>	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

#### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Species	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	всо2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Sequest	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 5. Activity Data

# 5.9. Operational Mobile Sources

#### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	112	9.78	3.89	29,913	1,950	170	67.7	520,669
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	24.0	2.03	0.81	6,407	418	35.4	14.1	111,525
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	60.0	5.19	2.10	16,013	1,250	108	43.7	333,710
User Defined Parking	82.0	6.94	2.78	21,884	1,517	128	51.4	404,786

# 5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	149,655	49,885	14,383

#### 5.10.3. Landscape Equipment

Season	Unit	Value

Snow Days	day/yr	0.00
Summer Days	day/yr	250

# 5.11. Operational Energy Consumption

#### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	459,177	349	0.0330	0.0040	1,904,827
Parking Lot	10,303	349	0.0330	0.0040	0.00
Parking Lot	64,106	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00
User Defined Parking	0.00	349	0.0330	0.0040	0.00

### 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	23,071,813	917,776
Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	0.00

### 5.13. Operational Waste Generation

#### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	93.8	0.00
Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	0.00

# 5.14. Operational Refrigeration and Air Conditioning Equipment

#### 5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Heavy Industry	Other commercial A/C and heat pumps	User Defined	150	0.30	4.00	4.00	18.0

# 5.15. Operational Off-Road Equipment

#### 5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
1		g				

#### 5.16. Stationary Sources

#### 5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Equipment Type	I del Type	radifice per bay	riodis poi Day	riodis por rodi	1 lorsopowor	Loud I doloi

#### 5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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#### 5.17. User Defined

Equipment Type	Fuel Type
_	_

#### 5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

 Vegetation Land Use Type
 Vegetation Soil Type
 Initial Acres
 Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type Initial Acres Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type Number Electricity Saved (kWh/year) Natural Gas Saved (btu/year)

# 6. Climate Risk Detailed Report

#### 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.1	annual days of extreme heat
Extreme Precipitation	2.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	6.94	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

#### 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

#### 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

#### 6.4. Climate Risk Reduction Measures

### 7. Health and Equity Details

#### 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	_
AQ-Ozone	97.0

AQ-PM	59.4
AQ-DPM	37.5
Drinking Water	9.23
Lead Risk Housing	47.7
Pesticides	62.1
Toxic Releases	42.9
Traffic	88.8
Effect Indicators	_
CleanUp Sites	86.7
Groundwater	47.4
Haz Waste Facilities/Generators	10.2
Impaired Water Bodies	0.00
Solid Waste	52.9
Sensitive Population	_
Asthma	60.6
Cardio-vascular	85.8
Low Birth Weights	31.7
Socioeconomic Factor Indicators	_
Education	87.7
Housing	81.3
Linguistic	64.8
Poverty	83.3
Unemployment	60.6

# 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator

Result for Project Census Tract

Economic	_
Above Poverty	6.351854228
Employed	6.03105351
Median HI	_
Education	
Bachelor's or higher	2.912870525
High school enrollment	14.38470422
Preschool enrollment	8.892595919
Transportation	
Auto Access	50.17323239
Active commuting	15.14179392
Social	_
2-parent households	34.73630181
Voting	3.888104709
Neighborhood	_
Alcohol availability	71.10227127
Park access	2.194276915
Retail density	13.39663801
Supermarket access	2.399589375
Tree canopy	1.013730271
Housing	_
Homeownership	46.10547928
Housing habitability	18.85025022
Low-inc homeowner severe housing cost burden	75.25984858
Low-inc renter severe housing cost burden	7.994353907
Uncrowded housing	6.73681509
Health Outcomes	_

Insured adults	2.810214295
Arthritis	0.0
Asthma ER Admissions	42.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	16.2
Cognitively Disabled	44.8
Physically Disabled	41.1
Heart Attack ER Admissions	12.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	86.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	_
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	_
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	51.6

Elderly	79.3
English Speaking	32.3
Foreign-born	68.1
Outdoor Workers	7.0
Climate Change Adaptive Capacity	_
Impervious Surface Cover	94.5
Traffic Density	80.7
Traffic Access	23.0
Other Indices	_
Hardship	97.3
Other Decision Support	_
2016 Voting	8.9

#### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	79.0
Healthy Places Index Score for Project Location (b)	2.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

#### 7.4. Health & Equity Measures

No Health & Equity Measures selected.

#### 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

# 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 9.13 acres
Construction: Construction Phases	Construction anticipated to begin February 1, 2023 and end January 31, 2024
Construction: Off-Road Equipment	Equipment based on equipment used for construction of similar projects
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis
Operations: Fleet Mix	Fleet mix revised based on information provided in the Traffic analysis
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater.
Characteristics: Project Details	ex

#### **APPENDIX 3.3:**

**CALEEMOD PROJECT LOCALIZED OPERATIONAL EMISSIONS MODEL OUTPUTS** 



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# BCI IV Harvill Industrial Center (Localized Operations) Custom Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	BCI IV Harvill Industrial Center (Localized Operations)
Lead Agency	_
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.84106820160365, -117.25207278942537
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5479
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	99.8	1000sqft	3.62	99,770	57,883	0.00	_	Passenger Cars
Parking Lot	73.0	Space	0.27	0.00	0.00	0.00	_	Standard Parking
Parking Lot	133	Space	1.68	0.00	0.00	0.00	_	Trailer Parking

Other Asphalt Surfaces	155	1000sqft	3.55	0.00	0.00	0.00	_	_
User Defined Industrial	99.8	User Defined Unit	0.00	0.00	0.00	0.00	_	Trucks
User Defined Parking	133	User Defined Unit	0.00	0.00	0.00	0.00	_	_

#### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	2.46	4.70	2.71	10.3	0.01	0.10	0.15	0.25	0.10	0.03	0.13	111	3,361	3,472	11.5	0.22	89.5	3,915
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	1.60	3.90	2.76	6.19	0.01	0.10	0.15	0.24	0.10	0.03	0.12	111	3,323	3,434	11.6	0.22	87.5	3,876
Average Daily (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	1.72	4.00	2.34	7.80	0.01	0.10	0.11	0.21	0.10	0.02	0.12	111	3,146	3,257	11.5	0.19	88.1	3,691
Annual (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	0.31	0.73	0.43	1.42	< 0.005	0.02	0.02	0.04	0.02	< 0.005	0.02	18.4	521	539	1.91	0.03	14.6	611

## 2.5. Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	1.56	1.49	1.52	4.96	0.01	0.01	0.15	0.16	0.01	0.03	0.03	_	731	731	0.11	0.09	2.00	764
Area	0.77	3.16	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Energy	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	2,458	2,458	0.22	0.02	_	2,468
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	2.46	4.70	2.71	10.3	0.01	0.10	0.15	0.25	0.10	0.03	0.13	111	3,361	3,472	11.5	0.22	89.5	3,915
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	1.47	1.39	1.61	5.22	0.01	0.01	0.15	0.16	0.01	0.03	0.03	_	711	711	0.12	0.10	0.05	742
Area	_	2.44	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Energy	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	2,458	2,458	0.22	0.02	_	2,468
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	1.60	3.90	2.76	6.19	0.01	0.10	0.15	0.24	0.10	0.03	0.12	111	3,323	3,434	11.6	0.22	87.5	3,876
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	1.07	1.01	1.16	3.87	< 0.005	0.01	0.11	0.11	0.01	0.02	0.03	_	521	521	0.09	0.07	0.63	545
Area	0.53	2.93	0.03	2.97	< 0.005	< 0.005	_	< 0.005	0.01	_	0.01	_	12.2	12.2	< 0.005	< 0.005	_	12.3
Energy	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	2,458	2,458	0.22	0.02	_	2,468
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233

Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	1.72	4.00	2.34	7.80	0.01	0.10	0.11	0.21	0.10	0.02	0.12	111	3,146	3,257	11.5	0.19	88.1	3,691
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	0.19	0.18	0.21	0.71	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	_	86.3	86.3	0.01	0.01	0.10	90.2
Area	0.10	0.53	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03
Energy	0.02	0.01	0.21	0.18	< 0.005	0.02	_	0.02	0.02	_	0.02	_	407	407	0.04	< 0.005	_	409
Water	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2
Waste	_	_	_	_	_	_	_	_	_	_	_	11.0	0.00	11.0	1.10	0.00	_	38.6
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	14.5	14.5
Total	0.31	0.73	0.43	1.42	< 0.005	0.02	0.02	0.04	0.02	< 0.005	0.02	18.4	521	539	1.91	0.03	14.6	611

# 4. Operations Emissions Details

# 4.1. Mobile Emissions by Land Use

#### 4.1.1. Unmitigated

Land Use	TOG	ROG		СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	1.39	1.35	0.32	4.00	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	363	363	0.07	0.04	1.15	378
Parking Lot	0.07	0.07	0.02	0.21	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	18.9	18.9	< 0.005	< 0.005	0.06	19.6
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

User Defined Industrial	0.02	0.02	0.32	0.20	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	_	91.0	91.0	0.01	0.01	0.18	95.6
User Defined Parking	0.07	0.05	0.87	0.55	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	258	258	0.02	0.04	0.60	271
Total	1.56	1.49	1.52	4.96	0.01	0.01	0.03	0.04	0.01	0.01	0.02	_	731	731	0.11	0.09	2.00	764
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
General Heavy Industry	1.31	1.27	0.35	4.22	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	342	342	0.08	0.04	0.03	356
Parking Lot	0.07	0.07	0.02	0.22	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	-	17.8	17.8	< 0.005	< 0.005	< 0.005	18.5
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.02	0.01	0.33	0.21	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	_	91.6	91.6	0.01	0.01	< 0.005	96.1
User Defined Parking	0.07	0.04	0.91	0.57	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	259	259	0.02	0.04	0.02	272
Total	1.47	1.39	1.61	5.22	0.01	0.01	0.03	0.04	0.01	0.01	0.02	_	711	711	0.12	0.10	0.05	742
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	0.17	0.17	0.05	0.57	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	41.8	41.8	0.01	< 0.005	0.06	43.5
Parking Lot	0.01	0.01	< 0.005	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	2.17	2.17	< 0.005	< 0.005	< 0.005	2.26
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

User Defined Industrial	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	11.0	11.0	< 0.005	< 0.005	0.01	11.6
User Defined Parking	0.01	0.01	0.12	0.08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	31.3	31.3	< 0.005	< 0.005	0.03	32.8
Total	0.19	0.18	0.21	0.71	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	_	86.3	86.3	0.01	0.01	0.10	90.2

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E		PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	912	912	0.09	0.01	_	917
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	172	172	0.02	< 0.005	_	173
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	1,084	1,084	0.10	0.01	_	1,091

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	912	912	0.09	0.01	_	917
Parking Lot	_	_	_	_	-	_	_	_	_	_	_	_	172	172	0.02	< 0.005	_	173
Other Asphalt Surfaces	_	_	_	-	-	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	1,084	1,084	0.10	0.01	_	1,091
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	151	151	0.01	< 0.005	_	152
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	28.5	28.5	< 0.005	< 0.005	_	28.7
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	-	_	_	_	_	_	_	-	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	180	180	0.02	< 0.005	_	181

#### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	1,373	1,373	0.12	< 0.005	_	1,377
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	1,373	1,373	0.12	< 0.005	_	1,377
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_	_	_
General Heavy Industry	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	1,373	1,373	0.12	< 0.005	_	1,377
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.13	0.06	1.15	0.97	0.01	0.09	_	0.09	0.09	_	0.09	_	1,373	1,373	0.12	< 0.005	_	1,377
Annual	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	0.02	0.01	0.21	0.18	< 0.005	0.02	_	0.02	0.02	_	0.02	_	227	227	0.02	< 0.005	_	228
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.02	0.01	0.21	0.18	< 0.005	0.02	_	0.02	0.02	_	0.02	_	227	227	0.02	< 0.005	_	228

## 4.3. Area Emissions by Source

#### 4.3.2. Unmitigated

				<i>y</i> .					<u> </u>									
Source	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily,	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Summer																		
(Max)																		

Consum er	_	2.15	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	0.29	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt	0.77	0.71	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Total	0.77	3.16	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	25.9		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	2.15	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	28.0	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	0.34	_	_	_	_	_	_	_	_	_	_	_		_	_	_	_
Consum er Products	_	0.39	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt	0.10	0.09	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03
Total	0.10	0.82	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03

# 4.4. Water Emissions by Land Use

### 4.4.2. Unmitigated

Land	TOG	ROG	NOx	со	SO2					PM2.5D		BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Use																		
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_			_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	-	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00

User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2

## 4.5. Waste Emissions by Land Use

#### 4.5.2. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	-	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	-	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_	-	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	-	233
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	-	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	-	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	66.7	0.00	66.7	6.66	0.00	_	233
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	11.0	0.00	11.0	1.10	0.00	_	38.6
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	11.0	0.00	11.0	1.10	0.00	_	38.6

## 4.6. Refrigerant Emissions by Land Use

#### 4.6.1. Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E			PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	_	_	_	_	_	_	<u> </u>	_	_	_	_	_	_	_	_	_	87.5	87.5
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	87.5	87.5
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
General Heavy Industry	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	14.5	14.5
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	14.5	14.5

## 4.7. Offroad Emissions By Equipment Type

#### 4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	<u> </u>	<u> </u>	_	_	_	_	_	_	<u> </u>	_	_	_	<u> </u>	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.8. Stationary Emissions By Equipment Type

#### 4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

				<del>, , , , , , , , , , , , , , , , , , , </del>														
Equipme nt Type	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_		_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

## 4.9. User Defined Emissions By Equipment Type

#### 4.9.1. Unmitigated

Equipme nt Type	TOG	ROG				PM10E				PM2.5D		BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Ontona				i i	1									000-	0111	Na O		000
Vegetatio n	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

			·	· .														
Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

#### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Species	TOG	ROG	NOx	CO CO	SO2			b/day for PM10T				BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Sequest	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	<u> </u>	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	<u> </u>	_	_	_	_	_	_	_	_	_

# 5. Activity Data

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Heavy Industry	457	38.7	15.5	122,072	389	32.9	13.2	103,761
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	23.8	2.01	0.80	6,343	20.2	1.71	0.68	5,392
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	25.7	2.17	0.87	6,869	21.9	1.85	0.74	5,839
User Defined Parking	81.2	6.87	2.75	21,665	69.0	5.84	2.34	18,415

## 5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	160,443	53,481	14,383

#### 5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

## 5.11. Operational Energy Consumption

#### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Heavy Industry	954,706	349	0.0330	0.0040	4,285,154
Parking Lot	63,948	349	0.0330	0.0040	0.00
Parking Lot	116,508	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00
User Defined Parking	0.00	349	0.0330	0.0040	0.00

## 5.12. Operational Water and Wastewater Consumption

#### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Heavy Industry	23,071,813	917,776
Parking Lot	0.00	0.00

Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	0.00

## 5.13. Operational Waste Generation

#### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	124	0.00
Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	0.00

## 5.14. Operational Refrigeration and Air Conditioning Equipment

#### 5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Heavy Industry	Other commercial A/C and heat pumps	User Defined	150	7.50	7.50	7.50	18.0

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Equipment Type	i dei Type	Linging riei	I vullibel pel Day	1 louis i ei Day	l ioisebowei	Load I actor

### 5.16. Stationary Sources

#### 5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

#### 5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMRtu/vr)
Equipment Type	I del Type	Indilibei	Doller Rating (MMDtu/III)	Daily Heat Input (MiMbtu/day)	Annual meat input (wiwibtu/yi)

#### 5.17. User Defined

Equipment Type	Fuel Type
_	_

### 5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

The state of Alleren	Fig. 1 A comp
Type Initial Acres	Final Acres
ĺ	l Type Initial Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type Initial Acres Final Acres

5.18.2. Sequestration

### 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
2.1			

# 8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 9.13 acres
Construction: Construction Phases	Construction anticipated to begin February 1, 2023 and end January 31, 2024
Construction: Off-Road Equipment	Equipment based on equipment used for construction of similar projects
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis
Operations: Fleet Mix	Fleet mix revised based on information provided in the Traffic analysis
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater.

# BCI IV Harvill Industrial Center (Operation LSTs) Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	BCI IV Harvill Industrial Center (Operation LSTs)
Lead Agency	_
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.84106820160365, -117.25207278942537
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5479
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	99.8	1000sqft	3.62	99,770	57,883	_	_	Passenger Cars
Parking Lot	73.0	Space	0.27	0.00	0.00	0.00	_	Standard Parking
Parking Lot	133	Space	1.68	0.00	0.00	0.00	_	Trailer Parking

Other Asphalt Surfaces	155	1000sqft	3.55	0.00	0.00	0.00	_	_
User Defined Industrial	99.8	User Defined Unit	0.00	0.00	0.00	0.00	_	Trucks
User Defined Parking	133	User Defined Unit	0.00	0.00	0.00	0.00	_	_

#### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	1.37	3.65	2.27	6.99	0.01	0.05	0.08	0.13	0.05	0.02	0.07	94.8	1,874	1,969	9.76	0.20	3.25	2,276
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	0.57	2.91	2.32	2.76	0.01	0.05	0.08	0.13	0.05	0.02	0.06	94.8	1,853	1,948	9.76	0.20	1.90	2,254
Average Daily (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	0.96	3.27	1.83	5.11	0.01	0.05	0.06	0.11	0.05	0.01	0.06	94.8	1,709	1,804	9.75	0.18	2.30	2,104
Annual (Max)	_	_	_	_		_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	0.17	0.60	0.33	0.93	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	15.7	283	299	1.61	0.03	0.38	348

## 2.5. Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	0.54	0.49	1.72	2.22	0.01	0.01	0.08	0.09	0.01	0.02	0.02	_	582	582	0.06	0.08	1.38	610
Area	0.77	3.14	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Energy	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	1,120	1,120	0.10	0.01	_	1,125
Water	_	_	_	-	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	-	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	1.37	3.65	2.27	6.99	0.01	0.05	0.08	0.13	0.05	0.02	0.07	94.8	1,874	1,969	9.76	0.20	3.25	2,276
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_
Mobile	0.51	0.46	1.80	2.33	0.01	0.01	0.08	0.09	0.01	0.02	0.02	_	578	578	0.06	0.09	0.04	605
Area	_	2.43	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Energy	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	1,120	1,120	0.10	0.01	_	1,125
Water	_	_	_	-	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	0.57	2.91	2.32	2.76	0.01	0.05	0.08	0.13	0.05	0.02	0.06	94.8	1,853	1,948	9.76	0.20	1.90	2,254
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	0.37	0.33	1.30	1.71	< 0.005	0.01	0.06	0.07	< 0.005	0.01	0.02	_	422	422	0.05	0.06	0.44	443
Area	0.53	2.91	0.03	2.97	< 0.005	< 0.005	_	< 0.005	0.01	_	0.01	_	12.2	12.2	< 0.005	< 0.005	_	12.3
Energy	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	1,120	1,120	0.10	0.01	_	1,125
Water	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Waste	_	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177

Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	0.96	3.27	1.83	5.11	0.01	0.05	0.06	0.11	0.05	0.01	0.06	94.8	1,709	1,804	9.75	0.18	2.30	2,104
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	0.07	0.06	0.24	0.31	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	69.9	69.9	0.01	0.01	0.07	73.3
Area	0.10	0.53	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	_	0.01	0.01	_	0.01	_	185	185	0.02	< 0.005	_	186
Water	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02	_	57.2
Waste	_	_	_	_	_	_	_	_	_	_	_	8.37	0.00	8.37	0.84	0.00	_	29.3
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.31	0.31
Total	0.17	0.60	0.33	0.93	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	15.7	283	299	1.61	0.03	0.38	348

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.34	0.33	0.08	0.98	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	89.0	89.0	0.02	0.01	0.28	92.5
Parking Lot	0.07	0.07	0.02	0.21	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	19.1	19.1	< 0.005	< 0.005	0.06	19.8

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.06	0.04	0.75	0.48	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	_	213	213	0.02	0.03	0.43	224
User Defined Parking	0.07	0.05	0.88	0.56	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	261	261	0.02	0.04	0.61	274
Total	0.54	0.49	1.72	2.22	0.01	0.01	0.03	0.03	0.01	0.01	0.02	_	582	582	0.06	0.08	1.38	610
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.32	0.31	0.08	1.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	83.7	83.7	0.02	0.01	0.01	87.1
Parking Lot	0.07	0.07	0.02	0.22	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	-	17.9	17.9	< 0.005	< 0.005	< 0.005	18.7
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.06	0.03	0.78	0.49	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	_	214	214	0.02	0.03	0.01	225
User Defined Parking	0.07	0.04	0.92	0.58	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	_	262	262	0.02	0.04	0.02	275
Total	0.51	0.46	1.80	2.33	0.01	0.01	0.03	0.04	0.01	0.01	0.02	_	578	578	0.06	0.09	0.04	605
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.04	0.04	0.01	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	10.2	10.2	< 0.005	< 0.005	0.01	10.7

Parking Lot	0.01	0.01	< 0.005	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	2.19	2.19	< 0.005	< 0.005	< 0.005	2.28
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.01	< 0.005	0.10	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	25.9	25.9	< 0.005	< 0.005	0.02	27.2
User Defined Parking	0.01	0.01	0.12	0.08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	31.6	31.6	< 0.005	< 0.005	0.03	33.2
Total	0.07	0.06	0.24	0.31	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	69.9	69.9	0.01	0.01	0.07	73.3

# 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	439	439	0.04	0.01	_	441
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	71.1	71.1	0.01	< 0.005	_	71.5
Other Asphalt Surfaces	_		_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00

User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	510	510	0.05	0.01	_	513
Daily, Winter (Max)	_	_	_	_	_	_	_	-	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	439	439	0.04	0.01	_	441
Parking Lot	_	_	-	_	_	_	_	_	_	_	_	-	71.1	71.1	0.01	< 0.005	_	71.5
Other Asphalt Surfaces	_	_	_	_	_	_	_	-	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	-	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	-	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	510	510	0.05	0.01	_	513
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	72.6	72.6	0.01	< 0.005	_	73.0
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	_	11.8	11.8	< 0.005	< 0.005	_	11.8
Other Asphalt Surfaces	_	_	_	_	_	-	_	-	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00

User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	84.4	84.4	0.01	< 0.005	_	84.9

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Officia				iy, ton/yr		,												
Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	610	610	0.05	< 0.005	_	612
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	610	610	0.05	< 0.005	_	612
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Unrefrige Warehous Rail		0.03	0.51	0.43	< 0.005	0.04	-	0.04	0.04	_	0.04	_	610	610	0.05	< 0.005	_	612
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.06	0.03	0.51	0.43	< 0.005	0.04	_	0.04	0.04	_	0.04	_	610	610	0.05	< 0.005	_	612
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	0.01	0.01	0.09	0.08	< 0.005	0.01	_	0.01	0.01	_	0.01	_	101	101	0.01	< 0.005	_	101
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	-	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.01	0.01	0.09	0.08	< 0.005	0.01	_	0.01	0.01	_	0.01	_	101	101	0.01	< 0.005	_	101

# 4.3. Area Emissions by Source

### 4.3.2. Unmitigated

Source	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	2.15	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	0.27	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt	0.77	0.71	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Total	0.77	3.14	0.04	4.34	< 0.005	0.01	_	0.01	0.01	_	0.01	_	17.8	17.8	< 0.005	< 0.005	_	17.9
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	2.15	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	0.27	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	2.43	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	0.39	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Architect ural		0.05	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt	0.10	0.09	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03
Total	0.10	0.53	< 0.005	0.54	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	2.02	2.02	< 0.005	< 0.005	_	2.03

# 4.4. Water Emissions by Land Use

# 4.4.2. Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	-	-	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345

D-9.																		
Daily, Winter (Max)							_											
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	-	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	44.2	155	199	4.55	0.11	_	345
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	7.32	25.6	32.9	0.75	0.02		57.2
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_			_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00

User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_		_	_	_	_	_	_		_	_	7.32	25.6	32.9	0.75	0.02	_	57.2

# 4.5. Waste Emissions by Land Use

# 4.5.2. Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_		_	50.5	0.00	50.5	5.05	0.00	_	177
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Unrefrige Warehous Rail		_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Parking Lot	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	50.5	0.00	50.5	5.05	0.00	_	177
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	-	_	_	_	_	_	_	_	_	_	8.37	0.00	8.37	0.84	0.00	_	29.3
Parking Lot	_	-	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	-	0.00
Other Asphalt Surfaces	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Industrial	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
User Defined Parking	_	_	_	-	_		-	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_				1							8.37	0.00	8.37	0.84	0.00		29.3

# 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

	<b>O</b> 11 <b>O</b> 1 <b>O</b> 1	(1.57 0.0	.,	iy, tori/yr	101 01111	aai, aiia	J. 100 (.	o, day .c.	dany, ii	, ,	a							
Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	-	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	-
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1.87	1.87
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unrefrige rated Warehou se-No Rail	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.31	0.31
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.31	0.31

# 4.7. Offroad Emissions By Equipment Type

#### 4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 4.8. Stationary Emissions By Equipment Type

#### 4.8.1. Unmitigated

			<u> </u>															
Equipme nt Type	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	<u> </u>	_	_	_	<u> </u>	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type		ROG		со	SO2	PM10E			PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Vegetatio n	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use						PM10E				PM2.5D		BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

#### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Species	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	всо2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Sequest	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove d	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 5. Activity Data

# 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	112	9.78	3.89	29,913	95.2	8.31	3.31	25,426
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	24.0	2.03	0.81	6,407	20.4	1.73	0.69	5,446
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	60.0	5.19	2.10	16,013	51.0	4.41	1.78	13,611
User Defined Parking	82.0	6.94	2.78	21,884	69.7	5.90	2.36	18,601

# 5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	149,655	49,885	14,383

### 5.10.3. Landscape Equipment

Season	Unit	Value

Snow Days	day/yr	0.00
Summer Days	day/yr	250

# 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	459,177	349	0.0330	0.0040	1,904,827
Parking Lot	10,303	349	0.0330	0.0040	0.00
Parking Lot	64,106	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00
User Defined Parking	0.00	349	0.0330	0.0040	0.00

# 5.12. Operational Water and Wastewater Consumption

# 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	23,071,813	917,776
Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	0.00

# 5.13. Operational Waste Generation

#### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	93.8	0.00
Parking Lot	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00
User Defined Parking	0.00	0.00

# 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Heavy Industry	Other commercial A/C and heat pumps	User Defined	150	0.30	4.00	4.00	18.0

# 5.15. Operational Off-Road Equipment

#### 5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
1		g				

### 5.16. Stationary Sources

#### 5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Equipment Type	I del Type	radifice per bay	riodis poi Day	riodis por rodi	1 lorsopowor	Loud I doloi

#### 5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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#### 5.17. User Defined

Equipment Type	Fuel Type
_	_

### 5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

 Vegetation Land Use Type
 Vegetation Soil Type
 Initial Acres
 Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type Initial Acres Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type Number Electricity Saved (kWh/year) Natural Gas Saved (btu/year)

# 6. Climate Risk Detailed Report

#### 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.1	annual days of extreme heat
Extreme Precipitation	2.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	6.94	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

#### 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

#### 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

#### 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

#### 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	_
AQ-Ozone	97.0

59.4
37.5
9.23
47.7
62.1
42.9
88.8
_
86.7
47.4
10.2
0.00
52.9
_
60.6
85.8
31.7
_
87.7
81.3
64.8
83.3
60.6

# 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator Result for Project Census Tract

Economic	_
Above Poverty	6.351854228
Employed	6.03105351
Median HI	_
Education	
Bachelor's or higher	2.912870525
High school enrollment	14.38470422
Preschool enrollment	8.892595919
Transportation	
Auto Access	50.17323239
Active commuting	15.14179392
Social	_
2-parent households	34.73630181
Voting	3.888104709
Neighborhood	_
Alcohol availability	71.10227127
Park access	2.194276915
Retail density	13.39663801
Supermarket access	2.399589375
Tree canopy	1.013730271
Housing	_
Homeownership	46.10547928
Housing habitability	18.85025022
Low-inc homeowner severe housing cost burden	75.25984858
Low-inc renter severe housing cost burden	7.994353907
Uncrowded housing	6.73681509
Health Outcomes	_

Insured adults	2.810214295
Arthritis	0.0
Asthma ER Admissions	42.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	16.2
Cognitively Disabled	44.8
Physically Disabled	41.1
Heart Attack ER Admissions	12.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	86.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	_
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	_
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	51.6

Elderly	79.3
English Speaking	32.3
Foreign-born	68.1
Outdoor Workers	7.0
Climate Change Adaptive Capacity	_
Impervious Surface Cover	94.5
Traffic Density	80.7
Traffic Access	23.0
Other Indices	_
Hardship	97.3
Other Decision Support	_
2016 Voting	8.9

#### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	79.0
Healthy Places Index Score for Project Location (b)	2.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

#### 7.4. Health & Equity Measures

No Health & Equity Measures selected.

#### 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

# 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

Screen	Justification
Land Use	Total Project area is 9.13 acres
Construction: Construction Phases	Construction anticipated to begin February 1, 2023 and end January 31, 2024
Construction: Off-Road Equipment	Equipment based on equipment used for construction of similar projects
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis
Operations: Fleet Mix	Fleet mix revised based on information provided in the Traffic analysis
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater.
Characteristics: Project Details	ex